

**Agreement and Transitivity  
in Middle Ukrainian Resultative and Passive -no/-to Constructions:  
A Corpus-Based Diachronic Investigation**

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## II. List of abbreviations

acc	accusative	nom	nominative
anim	animate	NTF	-no, -to form
ANNIS	ANNotation of Information Structure	NP	nominal phrase
aor	aorist	num	numeral
attr	attribute	Obs	observations
cf.	compare	OCS	Old Church Slavonic
Coef	coefficient	OES	Old Eastern Slavonic
COP	copula	OCR	Optical Character Recognition
CP	canonical passive	OR	Old Russian
decl	declination	perf	perfective
df	degrees of freedom	pers	person
ed.	editor(s)	pg	page(s)
e.g.	for example	pl	plural
ex	example	pol	Polish
exx	examples	PolDi	Polish Diachronic corpus
fut	future	PP	prepositional phrase
GATE	General Architecture for Text Engineering	PPP	passive past participle
gen	genitive	PR	Processing Resource
habit	habitative	pres	present
hybr	hybrid	pron	pronoun
impf	imperfective	Q	quantifier
inan	inanimate	RegEx	Regular Expressions
inst	instrumental	ru	Russian
intran	intransitive	RRuDi	Regensburg Russian Diachronic
iter	iterative	S.E.	Standard Error
i.a.	among others	semi-mod	semi-modern
i.e.	that is	semi-pol	semi-Polish
fem	feminine	sg	singular
gen	genitive	subj	subjunctive
HTML(.html	hypertext markup language	TEI	Text Encoding Initiative
)		tran	transitive
JAPE	Java Annotation Patterns Engine	ua	Ukrainian
masc	masculine	vol.	volume
MR	Middle Russian	vs.	versus
mod	modern	XML(.xml)	Extensible Markup Language
MU	Middle Ukrainian		
neg	negation		
n	neuter		

### III. Scientific transliteration of Cyrillic signs

(Based on the table elaborated by Daniel Bunčić for Eastern and Southern Slavonic languages<sup>1</sup>)

Cyrillic	Ukrainian	Belorussian	Russian	Church Slavonic
А а	A a	A a	A a	A a
Б б	B b	B b	B b	B b
В в	V v	V v	V v	V v
Г г	H h	H h	G g	G g
Ґ ґ	G g			
Д д	D d	D d	D d	D d
Е е	E e	E e	E e	E e
Є є/ё	Ė ė			
Є є	Je je			E e
Ё ё		Ё ё	Ё ё	
Ж ж	Ž ž	Ž ž	Ž ž	Ž ž
З з				З з
З з	Z z	Z z	Z z	Z z
И и	Y y		I i	I i
І і	I i	I i	(Ĭ) (i)	Ĭ ĭ
Ї ї	Ji ji			Ĭ ĭ
Й й	J j	J j	J j	J j
К к	K k	K k	K k	K k
Л л	L l	L l	L l	L l
М м	M m	M m	M m	M m
Н н	N n	N n	N n	N n
О о	O o	O o	O o	O o
П п	P p	P p	P p	P p
Р р	R r	R r	R r	R r
С с	S s	S s	S s	S s
Т т	T t	T t	T t	T t
У у	U u	U u	U u	U u

<sup>1</sup> The table is available on <http://slavistik.phil-fak.uni-koeln.de/fileadmin/slavistik/Mitarbeiter/Buncic/translit.pdf>

Ÿ ŷ		Ŭ ŭ		
8 8				Ou ou
Φ φ	F f	F f	F f	F f
Χ χ	Ch ch	Ch ch	Ch ch	Ch ch
Ω ω				Ō ō
Ц ц	C c	C c	C c	C c
Ч ч	Č č	Č č	Č č	Č č
Ш ш	Š š	Š š	Š š	Š š
Щ щ	Šč šč		Šč šč	Št št
Ъ ъ			" "	Ъ ъ
Ы ы		Y y	Y y	Y уѣ
Ь ь	'	'	'	Ь ь
Ѣ ѣ			Ě ě	Ě ě
Э э		Ê ê	Ê ê	
Ю ю	Ju ju	Ju ju	Ju ju	Ju ju
Я я	Ja ja	Ja ja	Ja ja	
ЈА, ја				Ja ja
ЈЕ је				Je je
ЈА ја				Ĳ ĳ
ЈЖ јж				Q q
ЈА ја				Ję ję
ЈЖ јж				Jq jq
Ξ ξ				X x
Ψ ψ				Ps ps
Θ θ			(F·) (f·)	F· f·
V v			(Ÿ) (ŷ)	Ÿ ŷ
,	,	,		



#### IV. List of texts and their editions

Akademičnyj litopys	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Akty Poltavs'koho polkovoho sudu (1668-1740)	<i>Pam'jatky ukrajins'koji movy: Serija aktovyh dokumentiv i hramot</i> (2017) ed. I.P. Čepiha, U.M. Štandenko. Kyjiv: Nacional'na Akademiya Nauk Ukrainy.
Akty Žytomyrs'koho hrods'koho urjadu (1590 r., 1635 r.)	<i>Pam'jatky ukrajins'koji movy: Serija aktovyh dokumentiv i hramot</i> (2004). ed. V.M. Mojsijenko. Žytomyr: Nacional'na Akademiya Nauk Ukrainy.
Apokrys	<i>Pamjatniki polemičeskoj literatury</i> (1882). Russkaja istoričeskaja biblioteka. Spb., vol. 7, book 2.
Barkulabivs'kyj litopys	<i>Polnoe sobranie russkich letopisej</i> (1975) vol. 32, Moskva: Izdatel'stvo Nauka.
Chmil'nyc'kyj litopys	“Chmel'nickaja letopis' (1636-1650)” (1878). <i>Letopis' Samovidca po novootkrytym spiskam</i> . ed. O.I. Levickij. Kiev: Kievskaja Starina, 77-81.
Chronika Bychovcja	<i>Polnoe sobranie russkich letopisej</i> (1975) vol. 32, Moskva: Izdatel'stvo Nauka.
Chronika Lytovs'ka j Žmojts'ka	<i>Polnoe sobranie russkich letopisej</i> (1975) vol. 32, Moskva: Izdatel'stvo Nauka.
Černihivs'kyj litopys	<i>Černigovskaja letopis' po novomu spisku (1587-1725) i Kolomackie čelobitnye</i> (1890). Ottisk iz Kievskoj Stariny. Kiev: Izdatel'stvo Al. Lazarevskogo.
Dymytrij Tuptalo's selected poetry	<i>Ukrajins'ka poezija: Kinec' XVI – počatok XVII st.</i> (1978) ed. V.P. Kolosova, V.I. Krekoten'. Kyjiv.
Dnevnik" general'nago choružago Nikolaja Chanenka (1727-1753)	Priloženije k" žurnalu „Kievskaja Starina“ (1884). Kiev": Tipografija G.T. Korčak"-Novickago, Michajlovskaja ulica, s. dom".
Dnevnik" getmanskoj kanceljarii za 1722-1723 roky	<i>Otryvki iz dnevnika getmanskoj kanceljarii za 1722-23 roky</i> (1898). Čtenija v istoričeskom obščestve Nestora Letopisca. ed. A.M. Lazarevskij. Book 12, Kiev, 90-145.
Dnevnik" Petra Daniloviča Apostola	<i>Kievskaja starina</i> (1895). vol. 50, 100-155.
Dnevnik" Simeona Okol'skago	<i>Lětopis' sobytij v" Juzozapadnoj Rossii v" XVII věkě sostavil" Samoil" Veličko</i> (1864). Priloženija. Vol. 4. Kiev, 183-296.
Dworzanin	PolDi
Herojični stychy	<i>Kievskaja starina</i> (1881) vol. 32, 154-161.
Historical Poetry collection	Various sources, i.a.: Kostomarov, N.I. (1870) <i>Istoričeskie monografii i issledovanija</i> . Sankt-Peterburg; Antonovič, V., Dragomanov, M. (1875) <i>Istoričeskie pesni malorusskogo naroda s ob'jasnenijami</i> . Kiev; Peretc, V.H. (1899). <i>Istoričeskie virši po rukopisi načala</i>

	<i>XVIII v.: Dokumenty, izvestija i zametki. Kiev": Kievskaja starina. Book 8.; Pieśni ludu ruskiego w Galicyi (1839) ed. Pauli. L'viv.</i>
Historija o cesaru rym'skom Otoni	Derkač, B. A. <i>Perekladna ukrajins'ka povist' XVII - XVIII st.</i> (1960) Kiev: AN URSR, 128-133.
Historija pravdyvaja o hrabynej Al'tdors'koj	Derkač, B. A. <i>Perekladna ukrajins'ka povist' XVII - XVIII st.</i> (1960) Kiev: AN URSR, 133-134.
Historiji, spysanii vkrotce dlja lipšoji pam'ati	Hudzij M. K. <i>Istorija semy mudreciv</i> (1959). № 4, 117-123.
Istorija o Attili, koroli uhors'kom	<i>Iz istorii romana i povesti. Materialy i issledovanija. Slavjano-rimskij otdel</i> (1888) ed. A. Veselovskij. Spb, 2.
Jevrejinovs'kij litopys	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Joanykij Haljatovs'kyj's selected poetry	Haljatovs'kyj, I. (1985). <i>Ključ rozuminnja</i> . ed. I.P. Čepiha. Kyjiv: Naukova dumka, 245-248; <i>Mesija pravdyvyj, Isus Chrystos</i> (1669). Kiev": Kiev Monastery of the Caves print office. Vilnius Universitiy library, R 239.
Kazannje rus'ke	Machnovec' L. <i>Satyra i humor ukrajins'koji prozy XVI – XVIII st.</i> (1964). Kyjiv: Naukova dumka, 390-392.
Kazan'je svjatocho Kyryla, patriarchy ijerusalym'skoho, o antichristě i znakach jeho	<i>Pam'jatky polemičnogo pys'menstva kincja XVI – i poč. XVII st.</i> (1906) ed. Kyrylo Studyns'kyj, vol. 1. L'viv, 31-200.
Ključ carstva nebesnoho	<i>Obstojaatel'noe opisanie staropečatnych knig slavjanskich i rossijskich chranjaščichsja v biblioteke F. A. Tolstova</i> (1829). ed. Stroev P. M. Moskva, 51-69.
Knyha o pobojišči Mamaja, carja tatars'koho, ot knjazja volodymers'koho i moskvos'koho	Šambinago S.K. (1906) <i>Povesti o Mamaevom poboišče</i> . Spb.
Knyžka	Vyšens'kyj Ivan (1959). <i>Tvory</i> . Kyjiv.
Komyčes'koje dijs'tvije	Rjezanov, V. I. (1927) <i>Drama ukrajins'ka</i> . 1. Starovynnyj teatr ukrajins'kyj: Škil'ni dijs'tva Rizdvjanoho cyklu. 4 <sup>th</sup> ed. Kyjiv: 169-182.
Kyjevo-Mychajlivs'kyj collection	S.A. Ščeglova (1913) <i>Virši prazdničnye i obličitel'nye na arian konca XVI – načala XVII v.</i> Spb.
Kyjivs'kyj litopys peršoji čverti XVII st.	<i>Ukrajins'kyj istoryčnyj žurnal</i> (1989) vol. 2, 107-120, vol. 5, 103-114.
Litopys Archeolohičnoho tovarystva	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Litopys Hryhorija Hrabjanky	<i>Dějstvija prezěl'noj i ot načala poljakov krvavšoj nebyvaloj brani Bogdana Chmel'nickogo, getmana zaporožskogo, s poljaki, za najjasnějšych korolej polskich Vladislava, potom i Kazěmira, v roku 1648, otpravavatisja načatoj i za lět desjat' po smerti Chmel'nickogo neokončenoj, z roznych lětopiscov i iz</i>

	<i>diariuša, na toj vojne pisannogo, v gradě Gadjaču, trudom Grigorija Grabjanki, sobrannaja i samobitnich starožylov svěditel'tvi utverždennaja. Roku 1710. Izdana Vremennoju komissieju dlja razbora drevnich aktov (1854). Kiev: V Universitetskoj tipografii.</i>
Litopys Krasyns'koho	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Litopys Panzynoho j Averky	<i>Polnoe sobranie russkich letopisej</i> (1975) vol. 32, Moskva: Izdatel'stvo Nauka.
Litopys Račyns'koho	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Litopys Samijla Velyčka	<i>Samijla Velyčka skazanije o vojne kozackoj z poljakamy</i> (1926). U Kyjevi: Z drukarni Ukrajins'koj Akademiji nauk (Pam'jatky ukrajins'koho pys'menstva. Vydaje Archeografična komisija Ukrajins'koj Akademiji nauk, vol. I).
Litopys Samovydcja	<i>Litopys Samovydcja</i> (1971) Ja. I. Dzyra. Kyjiv: Naukova dumka.
L'vivs'kyj litopys	<i>L'vivs'kyj litopys i Ostroz'kyj litopysec'</i> (1971) Kyjiv: Naukova dumka.
Lyzohubivs'kyj litopys	<i>Južno-russkija lětopisi</i> (1856) ed. M. Belozerskij. vol. I, 51-106.
Luc'ka zamkova knyha (1560-1561)	<i>Pam'jatky ukrajins'koj movy: Serija aktovyh dokumentiv i hramot</i> (2013) ed. V.M. Mojsijenko, V.V. Poliščuk. Luc'k: Nacional'na Akademija Nauk Ukrajinj.
Mežyhirs'kyj litopys	<i>Sbornik" lēmopisej, otnosjaščichsja k" istorii južnoj i zapadnoj Rusi</i> (1888). Kiev": Tipografija G. T. Korčak"-Novickago, Michajlov. ul., sobstv. dom".
Mohylevs'ka chronika T.R. Surty j Ju. Trubnyc'koho	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Na žalosnyj pohreb zacnoho rycera Petra Konaševyča Sahajdačnoho Nauka al'bo sposob zložennja kazannja	<i>Ukrajins'ka poezija: Kinec' XVI – počatok XVII st.</i> (1978) ed. V.P. Kolosova, V.I. Krekoten'. Kyjiv, 322-338. <i>Ključ rozuměnija, svjaščennykom, zakonnykom i ljaykom naležáčij. Z popravou j prydatkamy, ot nedostojnoho ijeromonacha Ioanykia Haljatovskoho, rektora y ihumena bratstva kijeviskoho</i> (1665). L'viv: drukarnja Mychajla Sl'ozky.
Nykyforivs'kyj litopys	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
O jedinoj istinnoj pravoslavnoj věřě	<i>Pamjatniki polemičeskoj literatury v Zapadnoj Rusi</i> (1882) Russkaja istoričeskaja biblioteka, vol. VII. Pb., book 2, 601-938.
Ol'shevs'kyj litopys	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Ostroz'kyj litopysec'	<i>L'vivs'kyj litopys i Ostroz'kyj litopysec'</i> (1971) Kyjiv: Naukova dumka.

Otpys na lyst v božě velebného otca Ypatija	<i>Otvet Klirika Ostrožskogo Ipatiju Poteju</i> (1903) <i>Pamjatniki polemičskoj literatury v Zapadnoj Rusi</i> . Spb., book 3, 377-432.
Otpys na druhij lyst velebného otca Ypatija	<i>Nezvisnyj tvir Klyryka Osrohsokoho</i> (1599). <i>Pam'jatky polemičnogo pys'menstva kincja XVI i poč. XVII v.</i> , vol 1, 201-229.
Palinodija	<i>Pamjatniki polemičskoj literatury Zapadnoj Rusi</i> (1878) <i>Russkaja istoričeskaja biblioteka</i> , vol. 4. book 1, Spb.
Pamiętniki (Janczar)	PolDi
Pamiętniki (Pasek)	PolDi
Pamvo Berynda's selected poetry	A. I. Syčevskaja (1912/1926) <i>Pamva Berynda i ego Virši na roždestvo Hristovo i dr. dni</i> . Kiev 1912. V.I. Rjezanov <i>Drama ukrajins'ka. I. Starovynnyj teatr ukrajins'kyj. Scenični vystavy u Halyčyni</i> . Zbirnyk istoryko-filolohičnogo viddilu VUAN, Kyjiv 1926.
Perestoroha	Manuscript in Vernads'kyj Central Library in Kiev, ф. 206 М/27, c. 99-130.
Perehrynacija, ili put' do Ijerusalyma Daniila archimandryty korsun'skogo s Běloj Rossij	<i>Perehrynacija, ili Put' do Ijerusalyma Daniila archimandryty korsun'skogo s Běloj Rossij</i> (1906) ed. Ščurat V. Žovkva.
Poklonen'e svjatoho grada Ijerusalima. 1531 g.	<i>Čtenija v imperatorskom obščestve istorii i drevnostej rossijskich pri Moskovskom universitete</i> (1911), book 4 (239), Moskva, 51-56.
Poslannja do Domniky	<i>Vyšens'kyj Ivan</i> (1959) Tvory. Kyjiv.
Poslannja Iovu Knjahynyc'komu	<i>Vyšens'kyj Ivan</i> (1959) Tvory. Kyjiv.
Povist' o jedynom koroli, kotoryj hodyv so zlodijem vnoči krasty	Hnatjuk, V. <i>Lehendy z Hitars'koho zbirnyka (I-ji polovyny XVIII v.)</i> . <i>Zapysky Naukovoho tovarystva im. Ševčenko</i> (1897), vol. 16, 4-8.
Povist' pro Troju	Manuscript of 16 <sup>th</sup> -17 <sup>th</sup> c. in Vernads'kyj Central Library in Kiev, № 2847, 46-54.
Prypovist' o tr'och mladencjach, kako ošukala ich odna vdova svojimy forteljamy barzo štučne	<i>Pamjatniki starinnoj russkoj literatury, izdavaemye grafom Grigoriem Kušelevym-Bezborodko</i> (1860). ed. H. Kostomarov. <i>Skazanija, legendy, povesti, skazki i pritči</i> . 2. ed. Sankt-Peterburg, 481-482.
Rum'ancevs'kyj litopys	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Skazanije o jednom ryceri slavnom	Hnatjuk, V. <i>Lehendy z Hitars'koho zbirnyka (I-ji polovyny XVIII v.)</i> (1897). <i>Zapysky Naukovoho tovarystva im. Ševčenko</i> , vol. 16, 14-18.
Skazanije o jednom cesari Ioviani	Hnatjuk, V. <i>Lehendy z Hitars'koho zbirnyka (I-ji polovyny XVIII v.)</i> (1897). <i>Zapysky Naukovoho tovarystva im. Ševčenko</i> , vol. 16, 20-27.
Slovo	Sumcov N.F. <i>Slovo o bezdoždii</i> (1914). <i>Sbornik Char'kovskogo istoriko-filologičeskogo obščestva v čest' prof. V. P. Bezeskula</i> . Char'kov, 6-9.

Slovo 1-e času vojny	Manuscript <i>Venec</i> 1676-1683 in Vernads'kyj Central Library in Kiev, 5546, 1533-1543.
Slovo k pravovirnym chrystianom pro carja Sonchosa	Derkač, B. A. <i>Perekladna ukrajins'ka povist' XVII - XVIII st.</i> (1960). Kiev, 135-139.
Slovo od pateryka o pokuti	Hnatjuk, V. <i>Lehendy z Hitars'koho zbirnyka (1-ji polovyny XVIII v.)</i> (1897). <i>Zapysky Naukovoho tovarystva im. Ševčenko</i> , vol. 16, 9-13.
Sluc'kyj litopys	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Songs and Poems by unknown authors	Several editions, i.a.: Voznjak, M. (1922) <i>Dva spivanyky polovyny j tret'oji četvertyny XVIII v. Zapysky Naukovoho tovarystva imeni Ševčenko</i> . L'viv; Peretc", V. N. (1907) <i>Novyja dannija dlja istorii starinnoj ukrainskoj liriki</i> . Spb: Tipografija imperatorskoj akademii nauk"; Javorskij, Ju., A. (1934) <i>Materialy dlja istorii starinnoj pesennoj literatury v Podkarpatskoj Rusi</i> . Praha: Orbis.
Suprasl's'kyj litopys	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Vertep	<i>Obyčai, pověr'ja, kuchnja i napitki malorossijan"</i> (1860). ed. N. Markevič. Kiev": V" tipografii I. i A. Davydenko.
Vilens'kyj litopys	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Virši-oraciji	Peretc, V. (1962) <i>Materialy i issledovanija po istorii starinnoj ukrainskoj literatury XVI – XVIII vekov</i> . Moskva-Leningrad: Izdatel'stvo Akademii nauk SSSR, 137-162.
Volyns'kyj korotkyj litopys	<i>Polnoe sobranie russkich letopisej</i> (1980) vol. 35, Moskva: Izdatel'stvo Nauka.
Voskresenije mertvyh	<i>Ukrajins'ki intermediji XVII-XVIII st.</i> (1960) ed. M. Hudzij., Kyjiv: Vydavnytstvo Akademiji nauk Ukrainy, 164-170, 176-178.
Ystoriya o lystrykijskom, to jest' o razbojničeskom ferarskom, abo florenskom sinode	<i>Istoriya o razbojničeskom Florentijskom sobore, izdannaja Klirikom Ostrožskim v 1598 g.</i> (1903). <i>Pamjatniki polemičskoj literatury v Zapadnoj Rusi</i> . Spb., book 3.
Zahorovs'kyj cycle of poetry	A. Dobrotvorskyj (1863). <i>Zagorovskij monastyr', ego biblioteka i sochranivšysja v nej zapadnorusskij literaturnyj pamjatnik XVII-go stoletija</i> . <i>Vestnik Jugo-Zapadnoj i Zapadnoj Rossii</i> .
Žytije knjahyni Ol'hy	Peretc V.N. <i>Issledovanie i materialy po istorii starinnoj ukrainskoj literatury XVI – XVIII vekov</i> (1962). Moskva, 61-76.
Žytije knjaziv Borysa i Hliba	Manuscript in Vernads'kyj Central Library in Kiev, Code: 287 П/126 С, Pg. 476-479.
Žytije knjazja Volodymyra	Manuscript in Vernads'kyj Central Library in Kiev, Code: ДА/416 Л, Pg. 424-435.

## 1. Introduction

“...any theory of language ought to be able to handle  
subject-verb agreement at least”

Hudson

In the project “Corpus Linguistics and Diachronic Syntax I: The Grammaticalization of Non-Canonical Subjects in Slavonic Languages” headed by Prof. Dr. Björn Hansen and Prof. Dr. Ernst Hansack, Prof. Dr. Roland Meyer demonstrated the presence of *-no*, *-to* marked with structural accusative already in the 15<sup>th</sup> c., two centuries before the reflexive-impersonal construction with accusative marking on the direct complement has been attested. In the present contribution, “Corpus Linguistics and Diachronic Syntax II: Subject Case, Finiteness and Agreement in Slavonic Languages” we continue the diachronic analysis of *-no*, *-to* predicates in Slavonic languages, this time especially focusing on *-no*, *-to* predicates in Middle Ukrainian. We are going to trace the relative frequency of *-no*, *-to* predicates in relation to periphrastic passive, as well as the syntactic change with respect to tense marking auxiliaries and agent expressions in Polish and Ukrainian. To investigate their lexical and argument structure in both languages we are also going to clarify the diachronic distribution of *-no*, *-to* with respect to predicate type, as well as outline the scope of differences between the periphrastic passive and *-no*, *-to* structures diachronically.

This thesis is structured into the sections below: the „Introduction“ (1) discusses synchronic properties of *-no*, *-to* predicates, especially focusing on the status of *-no*, *-to* affixes in Polish and Ukrainian, on the implicit subject and the voice of *-no*, *-to*. Besides, it shortly describes how this construction is depicted in current frameworks of Lexical-Functional Grammar, Minimalist Program and Role and Reference Grammar. The section „Middle Ukrainian and its textual corpus“ (2) gives an account on the language varieties spoken in 1500s-1700s on the territory of today's Ukraine. It addresses the issues of language contact and dialectal peculiarities in order to determine the nature of texts needed for our diachronic investigation of *-no*, *-to*. After that in „Theoretical preliminaries“ (3) we study the linguistic and philological accounts on the roots and origins of *-no*, *-to* in Common Slavonic, Eastern Slavonic and Polish, investigating the grammatical categories relevant for our study, particularly accounts on tense marking auxiliaries, agent expressions and predicate type. The

next section „Corpus linguistics and diachronic syntax“ (4) deals with methodological issues of corpus composition, coding and implementation. The focus is on the description of concrete steps that have been undertaken and the tools that have been used to be able to investigate the phrase structure of *-no*, *-to* historically. No linguistic investigation could have been possible without constructing and coding a corpus of Middle Ukrainian texts first. The section „Qualitative observations and key tendencies of the Middle period“ (5) is intended to provide examples that demonstrate core tendencies in the domain of passivoid phenomena in Middle period. The next section „Quantitative analysis and graphical display of obtained data“ (6) is the actual quantitative contribution of this thesis. Conclusions, final remarks and outlook are offered in sections (7) and (8). All mistakes and tergiversations are my own.

Predicate-related non-canonical marking is not a frequent phenomenon in European languages (cf. Haspelmath 2001, 79). Haspelmath (2001) observes that resultative predicates are intransitives that preclude direct object marking on their arguments (66). Besides, in nominative-accusative languages a predicate is expected to be in canonical agreement with its core argument. This however is not true for an accusative assigning resultative *-no*, *-to*<sup>2</sup> construction in Ukrainian and Polish. The unusual feature of this structure is the emergence of accusative case marking on the direct object complement of an intransitive passive past participle. As expressed in Lavine (2013), „the persistence of the transitivity property in the absence of an overt subject [...] is unexpected on standard assumptions of Passive and Case“ (3).

Due to their typologically unique case-specific and distributional properties, *-no*, *-to* have received a lot of attention in literature. In taking a complement marked with accusative, Polish and Ukrainian *-no*, *-to* violate Burzio’s Generalization, or suggestion that there is some

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2 The construction is known by several names in literature. Wiecezorek (1989) describes *-no*, *-to* predicates as non-agreeing passive [nesoglasujuščijsja passiv] (13). Siewierska (1988) refers to the construction by the term “the neuter participle ending in *-no/-to*” (246); or “the *-no/-to* impersonal participle (269). Franks (1995) refers to the construction by the cover term „passive + acc“, regardless whether the morpheme involved is *-no*, *-to* or reflexive *-sja* (333). Bezpojasko et al. (1993) describe it as the impersonal forms with neutralized passiveness [bezosobovi formy z nejtralizovanoju pasyvnistju] (158), or as the predicative form in *-no*, *-to* [prysudkova forma na *-no*, *-to*] (1983, 162). Cilyna (2008) describes Ukrainian *-no*, *-to* as active subjectless constructions with predicates in *-no*, *-to* [aktyvni bezsub’jektivni konstrukciji z predykatyvnymi formamy na *-no*, *-to*] (141-142). Lavine (2013) refers to it as „innovative transitive passive construction in Polish and Ukrainian“. Gladney (1983) describes *-no*, *-to* forms as the „o-impersonal“ construction. Przygoda (1976) refers to *-no*, *-to* as “personal transitive verbs” (129); Šachmatov (1925) describes *-no*, *-to* with direct object complement as „participial-verbal impersonal sentence“ [pričastnoglagoľnoe bezličnoe predloženie] (27); Kipka (1989) describes Polish *-no*, *-to* as „passive impersonals“ (135). Babby (1998) identifies *-no*, *-to* with „transitive impersonal passives“ (21). Further names: participial forms in *-no*, *-to* [dijeptrykmetnykovi formy na *-no*, *-to*] (Leonova 1983, 229); nominativeless constructions (Śpiewak, 2000); subject impersonals (Wiemer to appear); predicative forms in *-no*, *-to* (Charčenko 2011); near-passives (Lavine 2013, 185); Szucsich (2007) mentions Ukrainian *-no*, *-to* under the umbrella term „non-agreeing accusative impersonal sentences“.

connection between a theta role and the case assigning capacity of a verb. In other words, since passives and unaccusatives lack an external argument, Burzio (1986) has argued that only verbs that have an external argument, which can be either an agent or an experiencer, have the ability to assign accusative case (178). More specifically, an accusative case assignment to the noun phrase in object position must co-occur with a theta role assignment to the argument in the subject position. In addition to Burzio's Generalization, *-no*, *-to* flout the universality of Chomsky's (1981) idea of Case Absorption in a passive structure, where the accusative case assignment is usually no longer available, and the EPP, or the extended projection principle, since they involve passivized morphology and accusative case assignment at the same time (124). Chomsky's (1986) framework suggests that the objects in passive constructions must be realized as surface subjects, because a passivized non-finite verb form cannot assign structural accusative: "The projection principle requires that the former [subject/external argument] be syntactically realized, but not the latter [object/internal argument] ... the projection principle and the requirement that clauses have subjects ... constitute what is called the extended projection principle (EPP) in Chomsky (1981)" (116). The agency of the subject as a universally required constituent has been additionally expressed as the Final 1 Law of Relational Grammar (RG) by Perlmutter and Postal (1983), and as the Subject Condition by Bresnan & Kanerva (1989) in Lexical Functional Grammar (LFG). Babby (1998) observes that in contrast to the frameworks described above, in traditional framework impersonal clauses are usually viewed as structures that have undergone the syntactic operation of deleting its core argument, while the affix *-o* is considered to be a default agreement that appears on the verb whenever there is no subject NP for it to agree with (32).

Since *-no*, *-to* forms morphologically overlap with the passive, they have often been treated as an instance of the impersonal passive within the formal accounts that do not favor the idea of the existence of the subjectless constructions. Kibort (2004), reflecting on passivization, discusses two mechanisms at work: either the highest argument, usually realized as a subject, becomes downgraded to a lower grammatical position, whereas the lower argument becomes promoted to a higher position of the subject; or the lower argument, usually an object, becomes promoted to the subject, and the higher argument becomes downgraded to the status of an oblique, since a single predicate cannot have two arguments in the subject position (27-28). Whenever the highest core argument becomes downgraded and rendered optional, the predicate loses its core argument. There are languages where a demoted agent is not allowed to re-appear in the structure of the passive clause, since there is no



morphological strategy for re-introducing it into the reverted phrase structure. Usually however, the demoted core argument might re-surface in the phrase structure of the clause as an oblique argument, which would mean that the semantic tier is still intact, since both the number and the original interpretation of the initial arguments of the event denoted by the predicate are preserved (30).

Kibort (2004) observes that in the 1970s the accusative assigning *-no*, *-to* construction has played a major role in the discussion over subject demotion vs. object promotion as the core operation of the passive carried out within Relational Grammar framework. Perlmutter & Postal (1977) argued that it is the advancement of the initial direct object to the subject position in the first place, with resulting subject demotion as a by-product, that distinguishes the core property of a passive structure. On the contrary, Keenan (1975) and Comrie (1977) describe the demotion of the initial subject as the primary operation of the passive, with object advancement as a corollary. In the debate, the *-no*, *-to* construction with structural accusative was taken as evidence to support the subject demotion accounts of the passive (249-250). The discussion continued well into the later decades, e.g. Sobin (1985) challenges the universality of Chomsky's case absorption, or the hypothesis about the obligatoriness of a syntactically projected subject, in suggesting that the core property of passive is the subject demotion, not object promotion to the subject position (661). To support his claim Sobin (1985) uses the evidence from the Ukrainian *-no*, *-to* predicates, that he classifies as passives, where the object is not promoted to the subject position. Thus for the Ukrainian accusative assigning *-no*, *-to* Sobin (1985) introduces an idea of a subject noun phrase headed by an empty element, or a null expletive<sup>3</sup> (649), concluding, similar to Borsley (1988), that the case absorption is not a universal property of passive, since it is obviously optional in Ukrainian *-no*, *-to* predicates that he interprets as passives. Sobin (1985) argues that it is not case absorption but the non-assignment of a theta role to its subject that makes *-no*, *-to* passive. Contrary to Sobin (1985), Baker et al (1989) claims i.a. after Jaeggli (1986) that the passive morpheme *-en* itself functions as an argument that affixes to the predicate, arguing that its essential properties are those of a clitic, and that *-en* receives its theta role from the verb. Similar to Sobin (1985), Baker et al (1989) suggests that there is an empty category, or a null expletive element in the subject position of such structures. This expletive element is linked to the argument *-en* in *-no*, *-to* predicates and related passive constructions without overt agent expressions (223).

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3 An expletive element precludes the externalization of the internal argument, since the affix *-o* simply agrees with it, similar to what happens in case of overt neuter singular subjects.

Baker et al.'s (1989) ideas are not shared by Babby (1998), who rejects the idea of a null expletive element<sup>4</sup> in the surface subject position of Polish and Ukrainian structures with *-no*, *-to* desinence that is affixed to the passive morpheme *-(e)n*<sup>5</sup>, whose regular function is, according to Babby (1998), to enable the externalization of the internal theta role (21). Contrary to what is expected however, in Ukrainian *-no*, *-to* predicates “[t]he direct internal argument remains internal and maps onto the accusative direct object NP... [while] *-en* does not absorb case and does *not* make  $\theta_2$  external” (22). On the basis of such observation, Babby (1998) links the syntactic behavior of *-no*, *-to* clauses to the arbitrary nature of the surface subject position as such, assuming, that the impersonalization involves eliminating the external argument, which is only possible if it is not linked to the external theta role (32). Describing the role of *-o* in the derivation of impersonal *-no*, *-to* clauses, Babby (1998) further observes that the selection of *-o* is equivalent to the non-selection of the external argument of a verb, which means that there can be no externalization of an internal argument because there are no external inflectional features to check. Consequently, the externalization of an internal argument when *-o* is affixed to the verb stem produces ill-formed structures. Claiming that *-o* is a „dedicated impersonalizing suffix“, Babby (1998) additionally discusses classes of personal verbs that license the affixation of *-o*, meditating over the question whether all constraints on impersonalization should be stated in terms of verb class restrictions (33).

Kipka (1989), who views the Polish word final morphology in *-o* as invariable, and consequently, incapable of showing any agreement features, argues that *-o* e.g. in his *zjedzono cebulę* „must be acting so as to restore the Case assigning properties of the passive participle“, that is of *-no*, *-to* predicates in modern Polish. Drawing on Keyser's idea of „resurrected verbs“, Kipka (1989) actually offers a mechanism to explain the re-gained case assigning properties of *-no*, *-to* predicates like *czytano*, namely by assuming that *czyta-* is a verb, *czytan-* is a verbal adjective in the spirit of Chomsky (1981), and *czytano* is again verbal, so that finally „verbal powers, like that of assigning Accusative Case to direct objects,

4 In his later account, Babby (1994) remarks that the application of the null expletive analysis to *-no*, *-to* is generally problematic, since there are no overt expletives in Slavonic languages, and consequently it is unlikely there could be covert one(s). Babby (1994) further observes that Ukrainian impersonal structures in *-no*, *-to* (together with their Lithuanian cognates) actually represent the best argument against a null expletive analysis, since the terminal affix *-o* in *-no*, *-to* predicates agrees neither with the neuter, nor masculine or feminine singular, which means that the null expletive must have agreement features not shared by any other lexical head in Ukrainian. Expletive analysis in Ukrainian *-no*, *-to* would require an additional fourth gender. On the ground of this observation, Babby (1994) discards that null expletive analysis for Ukrainian *-no*, *-to*, preferring to stick to hypotheses that do not require null categories for which no language-internal evidence exists (32).

5 As explained in Babby (1998), in Government and binding framework the passive affix is generally entrusted with two functions: dethematization of the external argument, and the invalidation of the basic ability of transitives to assign structural accusative, responsible for the movement of the direct object complement to the subject position (20, fn.)

are once again available from the lexicon“ (147). Kipka (1989) observes that the *-o* affix „can, on the surface, occur (productively) only after passive morphology“, which as such is anchored to the past tense. He concludes that „Burzio's Generalisation seems to be violated on the surface; however, at D[*deep*]-structure and inside the V[*erb*]P[*hrase*] it is in fact literally obeyed ... the movement of the passive participle up to „-o“ gives us an additional result for free – namely the impossibility of any kind of auxiliary with the Passive Impersonal“ – an idea that in its essence echos Lavine's (2005/2013) take on modern Polish *-no*, *-to* affixes as the instantiation of Tense.

Further solutions offered to tackle the problem of case absorption that fails to occur, and the internal argument that fails to externalize are exemplified in Kibort (2004): Borsley (1988) has suggested that passive morphology in fact does not always absorb case, so that a passivized non-finite verb form can sometimes assign case similar to an active finite one (486); Franks (1995) has suggested that since nominative subject cannot surface in *-no*, *-to* predicates, the passive morpheme in Polish and several other languages can generally absorb either accusative or nominative case (348). Franks also argues that there is no theta role assignment to subject position in Polish *-no*, *-to*, which is occupied by a null expletive similar to a big PRO, the empty pronominal with arbitrary reference in non-finite clauses. In contrast, Bondaruk & Charzynska-Wójcik (2000) who have argued against the passive status of Polish *-no*, *-to* due to the presence of the accusative marking in the structure, suggest that the unexpressed subject of *-no*, *-to* is no expletive, since it does carry a theta role (cf. Kibort 2004, 248-249). Additionally Franks (1995) entertains the idea of relating the pro-drop phenomenon to the anormality of passive with accusative constructions in general, and *-no*, *-to* structures in particular. Still, a clear cut correlation between pro-drop and the existence of such constructions has not been attested in any given language so far (340).

While Lavine (2013) ties the subjectlessness of Ukrainian *-no*, *-to* predicates to the fact that they do not pose any agreement demands, arguing that subject advancement is necessarily keyed to agreement, Blevins (2003) suggests to avoid “complications” by treating both Ukrainian and Polish *-no*, *-to* forms as morphosyntactic impersonals that convey a passive meaning, which is rather like the passive meaning of the 3<sup>rd</sup> person plural verbs. Blevins (2003) offers a unified analysis of both Polish and Ukrainian *-no*, *-to* as morphosyntactically impersonal constructions with a suppressed rather than deleted subject and a direct object complement available in both languages. The reading of the suppressed subject oscillates: it is indefinite human in Polish and indefinite without any further specification in Ukrainian. In sharp contrast to Polish, the underspecified suppressed subject

in Ukrainian can surface in agent expressions. Blevins (2003) concludes that a passive classification of Ukrainian *-no*, *-to* predicates would demand the recognition of the innovative transitive passive construction where a logical subject is eliminated, and the direct object complement fails to surface in the subject position, re-appearing as an object instead. The idea of non-subject advancement being optional in transitive *-no*, *-to* passive does not fit into the promotional view of passivoid phenomena; this idea, however, Blevins (2003) explains, would exclude the opportunistic analysis of passives, making advancement a property that must be stipulated on a concrete “construction-by-construction basis” (493). Related ideas are expressed in Babby (1998), who likewise argues for a unified analysis of, in his view subjectless, transitive impersonal passive construction in *-no*, *-to* in contemporary Russian dialects, standard Ukrainian and standard Polish. The transitive impersonal passive affix *-en* that is attested in these three languages has the unifying properties below: *-en* is affixed to the perfective transitive verb stems, producing a participial form; the direct internal argument remains internal and receives accusative marking, so that *-en* does not absorb case; an impersonal inflectional ending in *-o* is affixed to *-en*, which is especially clear in case of Ukrainian and Polish, where the inflectional *-o* marks only impersonal structures (21-22).

As the name suggests, the construction ends either in *-no*, or in *-to*, two allomorphs of what looks like neuter singular form of a passive-participial predicate. Still, *-no*, *-to* form is a fossilized form, no longer part of a productive paradigm, since it does not belong to the inflectional repertoire of modern Polish and Ukrainian participles. In sharp contrast to Russian, the *-no*, *-to* affix is never used in Polish and Ukrainian canonical passive structures, because it is not interchangeable with the *-ne*, *-te* desinence that marks agreeing passive participle of singular neuter in both languages. Neither can it be used with neuter subjects in active clauses. The *-no*, *-to* is an affix attached to the lexical stem of a verb that can be analyzed as either a single morpheme *-no/-to*, or as two different morphemes, *-n/-t* and *-o* respectively. According to Rudnicka-Mosiadz (2000) distribution suggests that the *-n/-t* morpheme is equal to the morpheme that marks the past participial form. Moreover, the tight temporal restriction of *-no*, *-to* predicates to the past tense in Polish further speaks for their participial status (2). Among other accounts opting for the authentically participial status of *-no*, *-to* predicates is Sobin (1985), since he glosses his synchronic Ukrainian *-no*, *-to* ex as a neuter passive participle (649), even though in modern Ukrainian neuter participles no longer end in *-o*, but in *-e*. Sobin (1985) claims that *-no*, *-to* forms are “products of past passive participle ... formation” and that “the *-o* suffix is in agreement with a deep empty subject” (653). Discussing *-o* morpheme in Ukrainian *-no*, *-to* predicates, whose temporal meaning is

not as clearly cut as that of their Polish cognates, Sobin (1985) remarks that “it is much easier to maintain that there is such a neuter ending in *-o* in agreement with a suppressed subject than that *-no* and *-to* are atomic and that the formal correspondences are accidents or relics” (653-654). To support his claim of *-no*, *-to* as neuter singular participles of personal clauses, Sobin (1985) observes, similar to Rudnicka-Mosiadz (2000), that the stem alternation in *-no*, *-to* forms and passive participles is identical: the same suffixal consonants are employed under the same derivational conditions. Additionally, linguists like de Bray and Matthews describe *-no*, *-to* forms as neuter singular passive participles as well (653). Discussing Sobin's orthodox Government and Binding take on the synchronic *-no*, *-to*, Blevins (2003) remarks that the stem alternation relates to the “morphotactic segmentation of *-no/-to* forms, and not to the morphosyntactic analysis of their parts”. Moreover, Blevins (2003) continues, the terms used by historical linguists de Bray and Matthews cannot be used to describe the synchronic status of *-no*, *-to* clauses, since „passive“ in their framework designates form classes (cf. 493).

Kibort (2004), who actually views *-no*, *-to* in modern Polish as a single morpheme, describes *-no*, *-to* predicates as a “pseudo-participial form”, observing that *-no*, *-to* function only as a main verb and have neither adjectival properties nor distribution; the structure is not equal to the 3<sup>rd</sup> person neuter morphology of impersonal passives of intransitive verbs; it is also distinct from the Polish impersonal constructions with the default 3<sup>rd</sup> person singular neuter agreement (256). In the same vein, Dziwirek (1991) who views the 3<sup>rd</sup> person singular neuter morphology as a default form of the verb, stresses that *-no*, *-to* form, that she, like Kibort (2004) describes as a “pseudo-participle”, is in fact not the manifestation of a default verb realization (216-217). Yet Rudnicka-Mosiadz (2000), who, unlike Kibort, splits the *-no(-to)* suffix into two morphemes, suggests that the *-o* morpheme may be set equal to the default agreement marker, since it also marks the 3<sup>rd</sup> person singular neuter agreement (2). Rudnicka-Mosiadz (2000) also mentions that Śpiwak (2000), who likewise assumes a two-morpheme status of *-no*, *-to* affixes, interprets the *-o* morpheme as the “null agreement marker”, because the  $\theta$ -features like number, person and gender carried by inflectional endings are not encoded in the *-no*, *-to* predicates (2).

Pondering over the status of the exponent *-o*, Blevins (2003) remarks that this “invariant neuter singular ending that does not agree with any neuter noun in Ukrainian cannot be said to have any genuine connection to the gender or agreement system of the language (493).” Sobin's (1985) exponent *-o* that can only undergo agreement with suppressed subject reminds Blevins (2003) of the impersonal marker described in Babby (1989, 19). Blevins further remarks that such special impersonal form in *-o* occurs only in Polish and

Ukrainian, while in other Slavonic languages, e.g. in Russian, *-o* can signalize both agreeing neuter singular participles and non-agreeing participles, as it is the case with Ukrainian past tense auxiliary *bulo* or Russian *bylo*. Blevins (2003) actually proposes to treat *-o* as a “fourth person marker that can only agree with a suppressed fourth person subject” (cf. 493).

Babby (1998) discusses *-no*, *-to* structure with a nominative head noun other than neuter singular in Old Russian, interpreting it as a structure with a disrupted agreement. Contrary to the impersonal affix *-o* in modern standard Russian, the affix *-o* in Old Russian is, according to Babby (1998), not an impersonal ending. It is either a default agreement marker or, more likely, the marker responsible for the displacement of the verb's initial external theta role. Babby (1998) observes that in Old Russian, a verb agrees in gender and number with the projection of its initial subject, but not with the projection of the derived subject (34). In modern Russian however subject-verb agreement no longer distinguishes between initial and derived external arguments, while the *-o* suffix has developed into an impersonal ending, as it has done in Ukrainian and Lithuanian too, where the relations are clearer because the impersonal endings in these languages are not syncretic with a regular neuter participial agreement pattern (35).

Sjatovskij (1963a, 80) observes that “[i]t is necessary to establish what meaning *-no*, *-to* in all Slavic languages possess: active or passive. This is especially needed for constructions in *-no*, *-to* with a noun that does not agree in gender or number with the main member [i.e., predicate]”<sup>6</sup> (cited in Billings and Maling 1995, 69). The treatment of the *-no*, *-to* clauses in literature is two-fold: they have been analyzed either as non-passive predicates with indefinite human agent, cf. Bankowski (1967), Filin (1972), Dylą (1983), Proeme (1988), Dziwirek (1994), Siewierska (1988), Śpiewak (2000), Kibort (2004); or as an impersonal syntactic variant of canonical passive, cf. Mel'čuk (1974), Comrie (1977), Sobin (1985), Borsley (1988), Kipka (1989), Franks (1995), Babby (1998). The passive accounts of *-no*, *-to* have been especially frequent within formal linguistics tradition, since the very existence of subjectless constructions is doubted within these frameworks. Another

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6 The voice of *-no*, *-to* diachronically seems to pose questions as well. On the basis of the 17<sup>th</sup> century diary of Jan Pasek, Koneczna (1956) argues for the active status of diachronic *-no*, *-to* predicates (347). As becomes obvious from Koneczna's exx, diachronic Polish *-no*, *-to* predicates in fact possess qualities of both passive and non-passive predicates (according to the criteria laid out in Billings and Maling (1995, 41-42)). While the presence of accusative case, cf. *armate sprowadono*, and (possibly) the absence of tense marking auxiliary argue for the non-passive status of *-no*, *-to* predicates, the od-PP, in the ex *razono bardzo od szwedów* might be a clear indication of construction's passiveness (345). Matveenko (1962) however observes that while an active aorist interpretation of Polish *-no*, *-to* has been possible throughout the language's history, such reading was rare (92-93). In the same vein, Siewierska (1988) reports that Polish *-no*, *-to* clauses are historically passive, even though “a noticeable reduction in the use of *be* can be observed in Polish from the second half of the sixteenth century onwards, culminating in its total disappearance in the contemporary language” (271).

contributing factor sustaining the passive analysis of *-no*, *-to* is the morphological representation of the *-no*, *-to* affix, that looks like a singular neuter ending of a passive participle, welcoming associations with impersonal passive. Additionally, as Kibort (2004) observes, the passive analysis of the *-no*, *-to* has often been supported by the fact that diachronically *-no*, *-to* derive from a nominal neuter passive participle used with neuter passive subjects. Thus, Kibort (2004) remarks, such morphological similarity between the *-no*, *-to* predicates and passive past participles has led to a logical conclusion that *-no*, *-to* forms involve passive morphology and result from an application of an operation analogous to that of canonical passive (247).

In recent scholarship Ukrainian *-no*, *-to* predicates with accusative case assignment have come to be interpreted as true passives, cf. Sobin (1985), Billings and Maling (1995), Nedashkivs'ka Adams (1998). Sobin (1985) for instance describes the accusative assigning *-no*, *-to* in Ukrainian as a special type of impersonal passive, arguing that „Ukrainian is a language in which passive morphology does not absorb Case“. Thus according to Sobin (1985), the exx *Cerkva*<NOM> *bula*<ACC> *zbudovana*<PPP> and *Cerkvu*<ACC> *bulo*<AUX> *zbudovano*<NTF> demonstrate variation within the range of passivoid phenomena in modern Ukrainian (656). In similar vein, Billings and Maling (1995) argue that such syntactic properties of modern Ukrainian *-no*, *-to* as the appearance of agent expression in the instrumental oblique, overt tense marking auxiliaries, lexical restriction to perfective verb stems, parallel accusative assigning passives of imperfective reflexive verbs speak for the passive status of the synchronic Ukrainian *-no*, *-to* clauses (41). In Wieczorek's (1994, 106) opinion however, the passive character of Ukrainian *-no*, *-to* predicates “remain[s] in the sphere of a bare stipulation”; she observes that the “opinion expressed at some point in Ukrainian linguistics about the activeness of Ukrainian *-no*, *-to* constructions has not stimulated the problem to any resolution” (cited in Billings and Maling 1995, 87). Pugh & Press (1999) treat the accusative assigning *-no*, *-to* construction under „passive“ constructions in modern Ukrainian, observing however that *-no*, *-to* construction with structural accusative „shows an incomplete separation of the passive from the active, as the object would occur in the accusative in active constructions“ (251).

Traditional accounts usually interpret Ukrainian *-no*, *-to* as passivoid phenomena too. Already Levyc'kyj (1834) counts Ukrainian *-no*, *-to* predicates to passivoid phenomena, which we take for indication of kind for construction's departure from its Polish origin already in the early 19<sup>th</sup> c. (149). Matvijenko (1936) envisions the accusative assigning *-no*, *-to* as genuine passives and compares them to semantically akin German clauses with *man* and

French clauses with *on*; it is claimed that *-no*, *-to* predicates are employed particularly to express a greater degree of impersonality (33). Leonova (1983) takes the very *-no*, *-to* affixes for the indicator of passivity (178). Horodens'ka (1991) describes predicates in *-no*, *-to* in modern Ukrainian literary language as the end chain in the process of the complete formal-grammatical neutralization of the subject of the action, since there are no grammatical affixes in the structure of these frozen predicative forms, that would characterize the acting person (92).

The active accounts of the Ukrainian *-no*, *-to* predicates are numerous as well. Smerečyns'kyj (1932) describes synchronic Ukrainian *-no*, *-to* predicates as almost active (11). Likewise Filin (1971) believes that in the course of the centuries the passive meaning of Ukrainian *-no*, *-to* forms shifted to active (279). Also Doros (1975) interprets the Ukrainian *-no*, *-to* construction as active, arguing that the advent of tense marking auxiliaries in its structure did not interfere with the development of active meaning. Such passive to active shift is attributed to the Polish influence. Doros (1975) observes that pro-Russian intellectuals alone use the tense marking auxiliaries in the structure of *-no*, *-to* predicates (105). To Sjatovskij (1963b) Ukrainian and Polish *-no*, *-to* forms are finite and acting alike, since they are subjectless and preclude the realization of oblique subjects; the person performing the action in both Polish and Ukrainian *-no*, *-to* is indefinite (70); synchronically active Polish *-no*, *-to* forms can be historically traced back to the personal sentences with (agreeing) predicates in *-no*, *-to* (76). Polish and Ukrainian *-no*, *-to* forms are plainly active, whereas their Russian cognates are unambiguously passive (77-78). Sjatkovskij's (1963b) view on Polish and Ukrainian *-no*, *-to* as syntactic cognates is refuted by Arvat (1975), who actually lists *-no*, *-to* clauses with non-human doers, e.g. *Vikno*<ACC/NOM\_n\_sg> *rozbyto*<NTF> *vitrom*<INST\_natur> (252-253).

Another active account of modern Ukrainian *-no*, *-to* is Jižakevyč (1975), who argues that the accusative assigning *-no*, *-to* forms cannot be classified as passive, since they block the realization of the nominative case. Moreover, *-no*, *-to* forms in modern Ukrainian describe perfective states and correspond to the Russian adversity impersonals like *šljapu*<ACC\_a-decl> *uneslo*<PAST\_n\_sg> *vetrom*<INST> (252). Related observation is made by Zahrods'kyj (1954), who actually equals Ukrainian *-no*, *-to* clauses to Russian adversity impersonal predicates in *-lo* (69). Jižakevyč (1975) further observes that the segregation of the Ukrainian *-no*, *-to* forms from the system of passive past participles in Ukrainian is obvious from the possibility of accusative case assignment in the structure of *-no*, *-to* (272). Likewise, Lavrinec' (2013) interprets the *-no*, *-to* predicates as active forms that designate an action of indefinite



person(s). The subject expressed with instrumental case is thus not acceptable (311).

Additionally, there is a couple of accounts that describe the Ukrainian *-no*, *-to* predicates as neither active nor passive or, in other words, as exhibiting syntactic properties of both passive and non-passive, or active predicates. Fici Giusti (1994) for instance speaks for the intermediate syntactic position of Ukrainian *-no*, *-to* predicates between active and passive phenomena, because they share syntactic qualities with both Polish and Russian *-no*, *-to*. Namely, similar to Polish, Ukrainian *-no*, *-to* can be formed from intransitive verb stems, but they also trigger overt tense marking auxiliaries and instrumental agents just like their Russian cognate construction in *-no*, *-to* does (124). Fici Giusti (1994) further suggests that Ukrainian *-no*, *-to* forms are not a unified phenomenon, observing that *-no*, *-to* forms in the Western Ukraine are syntactically more akin to their Polish cognates, while those in the Eastern Ukraine exhibit syntactic features that resemble the features of the Russian passive participles in *-no*, *-to* (126).

Synchronic Polish *-no*, *-to* have also been treated as either active or passive predicates in literature, the passive accounts being less numerous. Mel'čuk (1974) for instance interprets Pol *-no*, *-to* clauses of the type *Zbudowano szkołę* as passivoid phenomena with a semantically empty null lexeme in place of the subject (359). Also Comrie (1977) argues for a truly passive status of Polish *-no*, *-to* predicates, mentioning however that the agent expressions are not eligible in the structure of Polish *-no*, *-to* (49). In his early Relational Grammar account against the impersonal passive analysis of synchronic Polish *-no*, *-to* predicates, precisely against Comrie (1977), Dylą (1983) argues that *-no*, *-to* in fact do not belong to the domain of passivoid phenomena, since neither promotion to the subject position nor subject demotion of any of their nominal dependents takes place in the structure of *-no*, *-to* clauses (124). Also Brajerski (1995) argues, within traditional framework, for an unequivocally active status of modern Polish *-no*, *-to*, on the basis of their straightforward syntactic properties, namely: *-no*, *-to* assign accusative, not nominative, cf. *podano herbatę*; if negated, the NP of *-no*, *-to* changes to genitive, cf. *Nie podano herbaty*; *-no*, *-to* operate on reflexives, cf. *myto się*, *ubierano się*, as well as on finite verbs with the clitic *się*, cf. *śmiano się*, *wybierano się do teatru*; and, finally, *-no*, *-to* accept modal verbs, cf. *Dokarmiano zwierzyńkę* vs. *Miano* (*musiano*, *chciano*, *zamierzano*, *zaczynano*, *przestano*) *dokarmiać zwierzyńkę* (461). Brajerski (1995) mentions that if *-no*, *-to* were passive structures, then modals in the 3<sup>rd</sup> person singular would occur either with infinitival copula *być* or *zostać*, cf. *\*Musiało być dokarmiano zwierzyńkę*. Moreover, if used in conditional mood, *-no*, *-to* behave exactly like finite active verbs (in the past tense), namely the modal particle *by* appears in

post-position to the *-no*, *-to*, cf. *schwymano by, jeżdżono by*. If the structures were passive, either the copula *być* or *zostać* would have appeared in the structure of subjunctive *-no*, *-to*, cf. *\*Zostałoby (byłoby) schwymano złożyńcę, \*Byłoby jeżdżono tą drogą* (462)<sup>7</sup>.

In similar vein, Damborský (1967) claims that Polish *-no*, *-to* are not truly participial forms, since their tense scope is strictly bound to the past and they never occur with tense marking auxiliaries, while true participles are atemporal and have to co-occur with additional tensed verbs in their structure to designate future and past tenses (50). Besides, many verbs that do not otherwise form participles in *-ny*, *-ty* can form *-no*, *-to* predicates, e.g. *siedziano, stano, leżano, biegano, śmiano się, bano się*. And, finally, *-no*, *-to* trigger the modal particle *by* similar to the finite verbs to designate the conditional mood, enclitizing to the *-no*, *-to* cf. *tańczonoby, śpiewanoby* (51). Also Siewierska (1988) goes on to argue that this construction is no longer passive in contemporary Polish, but should be treated as active impersonal, or active indefinite. She concludes that Polish *-no*, *-to* involve a fixed non-declinable form with a specialized impersonal function. Likewise, Wolińska (1978) observes that *-no*, *-to* predicates in modern Polish have active reading, and can be traced back to the cognate active finite sentences, i.e. *Dopiero pod koniec 1950 r. wprowadzono (wprowadzili) w niektórych prezydiach tytułem próby orzekanie kolegialne* (70).

The construction under scrutiny has been analyzed within several frameworks. The most successful accounts of *-no*, *-to* have been made within Lexical-Functional Grammar (Kibort 2004), Minimalist Program (Lavine 2013) and Role and Reference Grammar (Wiemer to appear). Lexical-Functional Grammar (LFG) is a phrase structure grammar and a kind of generative grammar<sup>8</sup> that operates on the idea of feature structure and constituent-structure. Kibort's (2004) model claims that if a construction has the form of the passive, e.g. Polish *-no*, *-to*, or the function of the passive, e.g. impersonals, but does not obey the morpho-syntactic rules of the passive, it is not passive (9). She further argues that the mechanism behind the re-alignment of the demoted agent in the passive is the downgrading of the highest argument by

7 Pondering over the status of Polish *-no*, *-to* historically, Brajerski (1995) is inclined to classify *-no*, *-to* as ambivalent, that is as neither clearly active nor as passive predicates (463). Brajerski (1995) takes the future copula *będzie* and the imperative copula *bądź* as the indicator of the passive structure. Undoubtedly passive are predicates that co-occur with copula *bywa(ło)*, e.g. *bywa(ło) utworzono*, since this tense marking auxiliary is never used with active predicates, i.e. *\*pisał bywa* (while forms *pisał jest* and *pisał był* occur historically). Brajerski (1995) further remarks that structures like *nie jest naleziono miasto jego* are passive, since the genitive of negation would have surfaced in its active cognate, cf. *nie (jest) naleziono miasta jego*. Unambiguously passive are also those *-no*, *-to* that have the agentive phrase in their structure (466). Brajerski (1995) remarks that *-no*, *-to* predicates with the numerical NP in Old Polish usually functioned as active finite verbs, not as passive predicates (472).

8 The generative syntax has been associated with Transformational grammars (Government and Binding theory of the 1980s and Minimalist Program of 1995) and non-transformational grammars (Relational Grammar and Lexical Functional Grammar).

mapping it onto an oblique function of an adjunct. The operation results in impersonal passive if there is no argument which could be promoted to the subject position (363).

A feature structure in LFG consists of a list of feature-value pairs. The value of a feature can be either simple or complex. If it is complex, it consists of further feature structure(s). Below is Kibort's (2004) representation of the f-structure of a *-no, -to* predicate *czytano*:

(1) f[eature]-structure of Polish *-no, -to*

f:	PRED	“czytano $\langle (f \neg \text{SUBJ})(f \text{OBJ}) \rangle$ ”	
	TENSE	PAST	
	$\neg$ SUBJ	PRED	$\emptyset$
		HUMAN	+
		NUM	PL
		GEND	VIR
		CASE	NOM
	OBJ	.	
		.	
		.	

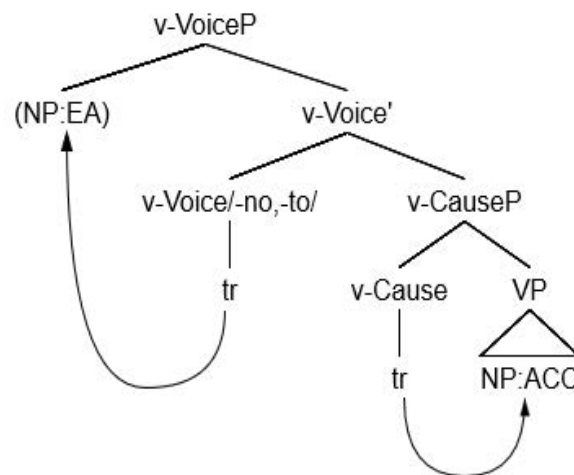
The large exterior matrix consists of two columns: its left column consists of the features PRED, TENSE,  $\neg$  SUBJ and OBJ, while the right column includes their correspondent values. The feature PRED has the value of a missing SUBJ and a theoretically allowed, but in this case unexpressed, OBJ. The feature TENSE has the value of the PAST. The value of the (missing) feature SUBJ is complex, since it consists of a number of values: its inner matrix has two columns, one for the features and another for the values. The upper inner matrix of this structure consists of the following feature-value pairs: PRED- $\emptyset$ , HUMAN-+, NUM-PL, GEND-VIR, CASE-NOM, which reveals that the (covert) subject of the *-no, -to* predicate *czytano* is a human virile singular sentient actor marked with structural nominative. The negation operator ( $\neg$ ) right in front of the inner matrix indicates that the grammatical function of the subject ( $\emptyset$ ) has been suppressed in the argument structure of *-no, -to*.

An alternative to LFG's feature structure mapping is the use of trees in transformational generative frameworks like Minimalist Program, where new syntactic formations are produced from existing formations via transformations. MP is based on the idea of economy of derivation and representation. MP has introduced a bare phrase structure instead of X-bar theory of earlier generative syntax, and derivation in stages, instead of the

idea of deep and surface structures (cf. Szucsich 2016, 45). Describing the nature of passive Szucsich (2016) observes that “whenever a verb is changed by passive morphology, its argument structure will be changed too [...]”. This causes the change in the case licensing as well. The accusative internal arguments (objects) of active sentence are marked with nominative in passive sentences”<sup>9</sup> (112). Lavine (2013) further observes that passivization in MP at least implies “the introduction of a passive morpheme into a *v*[oice]-head above *V*[erb] and a tense-marking auxiliary in *T*[ense]” (7). The voice within MP is construed as a functional head responsible for licensing the accusative case on the object in an active structure, and projecting the external argument in a passive structure (8).

Lavine (2013) remarks however that the property of projecting the external argument (usually nominative) and the property of assigning the internal argument (usually accusative) are not necessarily linked conceptually. Lavine (2013) observes, i.a. after Pylkkänen (2008) that the functional head *v* can be split into *v*-voice and *v*-cause. As a split head, *v*-voice is responsible for projecting an external argument and hosting a voice-altering morpheme, while the *v*-cause is responsible for licensing the structural accusative. When the two heads are bundled together, passive voice-head suppresses accusative case assignment on the object (8). In the accusative assigning *-no*, *-to* construction in Ukrainian however, the structure of *v* is unbundled and the accusative is projected despite its passive morphology, cf.:

(2) Split or unbundled *v* in Ukrainian *-no*, *-to*: *v*-Voice > *v*-Voice + *v*-Cause

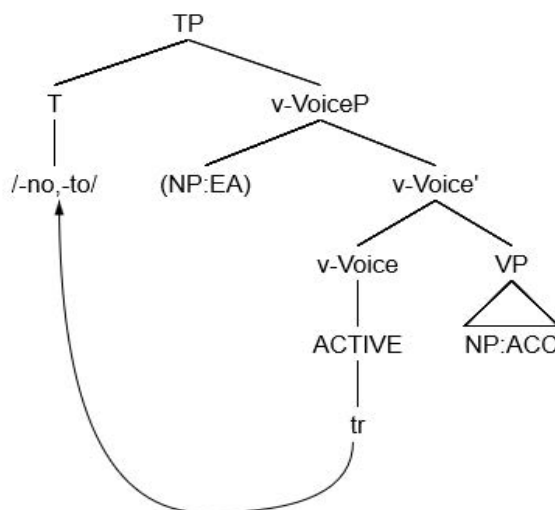


The tree above is adapted from Lavine (2013, 21). It represents a structure of

<sup>9</sup> The original definition is in German, cf. “Wird das Verb morphosyntaktisch durch die Passivmorphologie verändert, betrifft dies auch die Satzstruktur [...]. Dies führt auch zu veränderter Kasuslizenzierung. Die akkusativischen internen Argumente (Objekte) des Aktivsatzes werden im Passivsatz mit dem Nominativ markiert” (112).

unbundled voice-head P[rojection] in Ukrainian *-no*, *-to* predicates. The two traces with arrows demonstrate the simultaneous licensing of (implicit) EA [External Argument, or subject] and of the structural accusative. The tree demonstrates how the transitivity property persists despite the presence of the passive morpheme *-no*, *-to*: even though the passive morpheme heads *v*-Voice, the accusative assignment is not suppressed, since *v*-Cause is an independent head (21).

(3) The bundled *v* in Polish *-no*, *-to*: Cause > Tense

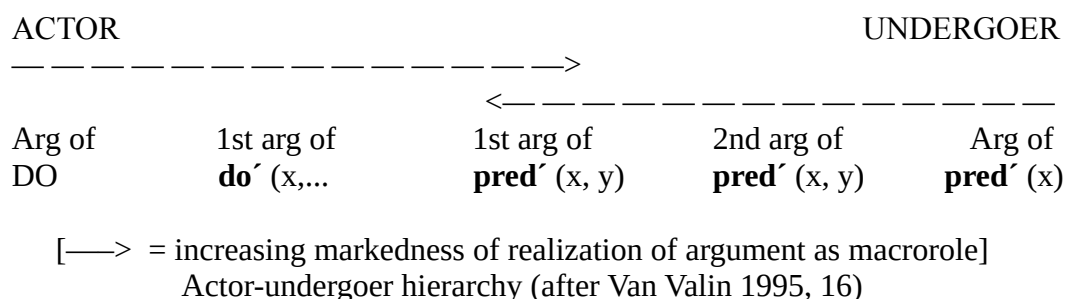


The tree above is adopted from Lavine (2013, 16). It shows a bundled voice-head *v* in Polish, where only “active” *v*-Voice, but crucially not “passive” *v*-Cause, is argument projecting. The anomaly of accusative in this structure is due to the reanalysis of the passive morpheme *-no*, *-to* as a property of Tense, not Voice: *-no*, *-to* is merged directly under T(ense) and, consequently, it is not voice-altering. Lavine (2013) observes that as a marker of Tense, Polish *-no*, *-to* explain the active status of the structure, the ban on the passive by-phrases, and the presence of a fully thematic external argument (16).

Another successful account of *-no*, *-to* has been attained within Role and Reference Grammar, a functional grammar theory that investigates the clause and its semantic, as well as communicative functions of a sentence. We take Wiemer (to appear) as a model of the functional approach to *-no*, *-to*, and summarize the major points of argumentation below. Thematic roles in this framework are called Macroroles, which act as the interface between the L[ogical]S[tructure] and syntactic representations. There are only two macroroles – Actor and Undergoer<sup>10</sup>. If a predicate has both macroroles, it is described as M[acrorole]-transitive,

<sup>10</sup> The notions “actor” and “undergoer” are to the two primary arguments in a transitive structure. Since each of

if it has only one macrorole, then it is M-intransitive, if it has none, it is M-atransitive (2). In line with Role and Reference Grammar, Wiemer (to appear) assumes that arguments of a predicate are arranged on a scale with the most agent-like (Actor) argument and the most patient-like (Undergoer) argument at both extremes, cf.:



The diagram above depicts 5 core argument positions in the actor-undergoer hierarchy. There are 3 intermediate positions between the extremes marked with “Actor” and “Undergoer”: Effector (Mover, Performer, Consumer, Operator, etc), Perceiver (Wanter, Possessor, Emoter, Attributant, etc) and Theme (Stimulus, Desire, Target, Locus, etc) (cf. Van Valin 1995, 14). Wiemer (to appear) observes that such specification of macroroles and classification of predicate-argument structures is crucial for grammatical operation of passives<sup>11</sup> and impersonals like *-no*, *-to* clauses (2). The impersonal construction *-no*, *-to* is described by Wiemer (to appear) as backgrounding passive, which is the result of the demotion of the Actor without the promotion of the Undergoer to PSA (Privileged Syntactic Argument) position. If there is a promotion, the result of operation is a genuine, or foregrounding passive. Contrary to genuine passive, *-no*, *-to* do not have a PSA, that is they show Actor demotion, but no Undergoer promotion. They can be formed from M-intransitive verbs whose macrorole is an Actor, and seldom from M-intransitives whose macrorole is an Undergoer. The genuine passive can be formed only from M(acrorole)-transitive verbs. In impersonals formed from M-intransitive verbs the Undergoer is marked as an object (2-3).

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the two integrates several further thematic relations, they are called “macroroles” (cf. Van Valin 1995, 15).

<sup>11</sup> Wiemer (to appear) defines passive as “a marked voice construction which preserves the argument structure of the unmarked voice (active), but syntactically deranks the highest-ranking (most agent-like) argument; simultaneously it promotes the lowest-ranking (most patient-like) argument to a privileged syntactic position” (1).

## 2. Middle Ukrainian and its textual corpus

### 2.1. Ukrainian<sup>12</sup>: its origin, its status, its standard(s) and its dialects

There are different views on the status and origin of the Ukrainian language in literature. There are also various models of its evolution from the Common Eastern Slavonic to modern standard Ukrainian. The problem of formation of Eastern Slavonic languages in general, and of Ukrainian in particular “hinges on how we treat the final stages of late C[ommon] S[lavic], and how we envisage the dialect groupings in the “transitional” period following C[ommon] S[lavic]” (cf. Wexler 1977, 52). The terminal date of Common Eastern Slavonic oscillates: it is either anchored to the loss of weak jers in the 10<sup>th</sup>-13<sup>th</sup> c., cf. Durnovo (1924), or to the second palatalization of velars in the 6<sup>th</sup>-7<sup>th</sup> c., cf. Filin (1972), Shevelov (1979).

The process of emergence of Ukrainian after the dissolution of Common Slavonic has been described by several models listed i.a. in Wexler (1977). The formation process proposed by Šachmatov (1894) includes the transitional stage of Old South Russian<sup>13</sup> language variety existing as a link between the Common East Slavonic and the modern Ukrainian. In similar fashion, Šachmatov (1894) introduces the idea of Old East Russian as a precursor of modern Belorussian. The Modern Great Russian in Šachmatov's model is formed from South Great Russian and North Great Russian that respectively split from Old East Russian and Old North Russian. Another model is proposed in Lehr-Splawiński (1921), who divided the Common Eastern Slavonic language variety into two large groups: a South Russian branch that later gave rise to Ukrainian, Belorussian and South Great Russian, and the North Russian branch that, having merged with South Great Russian produced Modern Great Russian. In similar fashion, the majority of Soviet and Western scholars of later decades tend to trace Ukrainian to the common proto-language of all three Eastern Slavonic languages, that is believed to have its roots in the 8<sup>th</sup> and 9<sup>th</sup> c. (cf. 53-55).

Alternatively, on the basis of phonological investigation into the earliest periods, Shevelov (1953), a prominent Soviet dissident from the Eastern Ukraine, challenged the very idea of the essentially uniform Common Eastern Slavonic language variety from which Ukrainian, Belorussian and Russian emerged. Tracing the typical features of all three

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12 The modern Ukrainian language is historically linked to the language variety spoken in the ancient state of Kievan Rus'. In the Middle period (16<sup>th</sup>-18<sup>th</sup> c.), the vernacular precursor to the modern Ukrainian existed parallel to Church Slavonic, a literary language of foreign descent different from the spoken one. Few written records are available for Ukrainian vernacular of the Middle period in its pure form.

13 Wexler (1977) considers the cover-term „Russian“ used for several East Slavonic language varieties in the period following the dissolution of Common Slavonic to be anachronistic (58).

languages directly to the Common Eastern Slavonic, he proposed the model of dialectal zones distinct from the very beginning instead of assuming the existence of a uniform Eastern Slavonic proto-language. In Shevelov's (1953) model, the dialects of Novgorod-Suzdal', Polack-Rjazan', Kiev-Palesse and Galicia-Podolia that had been attested already by the 10<sup>th</sup> c., were respectively shaped into Ukrainian, Belorussian and Russian approximately by the 16<sup>th</sup> c. (93).

Even though the Ukrainian language possesses several features that make it unique, the Tzardom of Russia and since 1721 the Russian Empire “considered Ukrainian to be a mere ‘Little Russian’ dialect of ‘Great Russian’, and the destiny of all Ukrainian speakers to be assimilated gradually to the ‘true’ Russian linguistic norm given their ‘Russian’ linguistic identity”. Michail Lomonosov, an 18<sup>th</sup> c. Russian Enlightenment scholar “denied the fundamental individuality of Ukrainian by reducing its differences from Russian to Polish influence” (cf. Hall and Koscharsky 2006, 161-162). In similar vein, De Bray (1951) observes that even as late as in the 19<sup>th</sup> c., Ukrainian was still not “recognized as a separate language; and Josef Dobrovský, the Czech scholar and the father of modern Slavonic studies, persisted until his death in refusing to admit it as anything more than a dialect of Russian” (70). Such attitudes have found their continuation in the language policy of later decades, especially within the Soviet Ukraine. Describing the status of the Ukrainian language in the first half of the 20<sup>th</sup> c. Shevelov (1989) observes that “[t]he prestige of the Ukrainian language remained low ... [it] was not only officially misrepresented as a dialect of Russian, but it was also used, alongside Russian dialects, to indicate colloquial [Russian] speech by virtually all Russian writers, from Bunin to Gor'kij” (54). Besides, Shevelov (1989) reports drastic manipulations on the Ukrainian language in the Soviet period, aimed at narrowing its identity. Apparently there was “interference into the very substance and structure of the Ukrainian language” (173), which was done by “prohibiting certain words, syntactic constructions, grammatical forms, spelling and orthoepic standards, while promoting others patterned on Russian or directly transplanted from Russian” (220).

Since in addition to deliberate ideological constraints, Ukrainian territories were continuously split between various political powers in the process of formation of Ukrainian, with fluctuating boundaries and distinct political alignments in the course of the centuries, Hall and Koscharsky (2006) envision the modern Ukrainian as a “split” language. They argue that the traces of language contact with Polish on the one hand and Russian on the other are especially visible in vocabulary, but morphology and syntax are affected as well (147). Against the background of such historical development it comes as little surprise that the



modern Ukrainian literary language has been characterized by its two standard variants which, as Hall and Koscharsky (2006) observe, have never been “perfectly harmonized” (1).

Namely, while Ukraine's standard literary language is based on the dialects spoken in Central Ukraine, especially in Poltava and Kiev areas<sup>14</sup>, the literary Ukrainian language of the diaspora population abroad is in large based on the Western Ukrainian language variety. The most numerous émigré group of Ukrainian speakers abroad is the Ukrainian Canadian diaspora community that was formed by emigrants from Galicia and Bukovyna, provinces of Austro-Hungarian empire, fleeing World War I. Consequently, the Ukrainian spoken in Canada goes back to the Galician dialect of Ukrainian and follows the literary norms of the Lviv koiné from the first half of the twentieth century. The two standards of literary norm – one used within and another outside of the Ukraine – seem to be ignoring the very existence of each other<sup>15</sup>. Such co-existence of two different standards of Ukrainian in the 20<sup>th</sup> and 21<sup>st</sup> c. might be linked to the rich internal variation within Ukrainian historically, which manifested itself in the rise and persistence of several mutually divergent dialects.

There are different approaches to the classification of Ukrainian dialects: they can be classified into Southern, Northern and Carpathian; or simply into Eastern and Western (cf. De Bray 1951, 78). Soviet and modern Ukrainian linguists usually distinguish three dialectal groups on the basis of their territorial affiliation: the Northern, the South-Western and the South-Eastern that are further subdivided into numerous sub-dialects. Historically however there have been only two major genetically independent dialectal types – North Ukrainian and South Ukrainian. Shevelov (1979) even claims that the contemporary Ukrainian language was formed from the merge of South Ukrainian dialect with the southern part of the North Ukrainian dialect, so that the dialectal differentiation into southern and northern units seems to be older than the Ukrainian language itself (752).

Shevelov (1979) argues that North Ukrainian dialects have preserved their core territorial affiliation throughout centuries, in fact even from prehistorical times. He

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14 Strumins'kyj (1984) observes that “[s]tarting in the wrong time and place, modern literary Ukrainian might convey the impression that it has proceeded as if historical memory did not exist. Thus, much of its orthography and terminology has had to be reinvented from peasant or foreign sources in a process marked by debates and controversies”. Strumins'kyj (1984) believes that “the Ukrainian language should rather have been centered on Galicia in the nineteenth century, with at least partial support from the Uniate Church and the Austrian Government. Instead, it was in the eastern Ukraine that it was developed from the 1790s on; here it received no support from the Church or the state. It became therefore a cause for private enthusiasts. A Galician basis would have also ensured for modern literary Ukrainian a better link with its Slavonic and vulgar Ruthenian past. In Galicia this past was not erased by decrees of Moscow's Patriarchs, Peter I, and the Holy Synod” (44-45).

15 e.g. Danylo Struk, a successful Canadian author of the Ukrainian language textbook for Undergraduates that survived numerous editions in Canada (1982/1987/1989/1991/1998) teaches the Lviv koiné alone; he does not mention the existence of a different codified standard currently used in Ukraine.

distinguishes three core groups of sub-dialects of North Ukrainian: Eastern Polissian, Central Polissian, and Western Polissian, observing that the river Dnieper marks the watershed between Eastern and Central Polissian sub-dialects, while Western Polissian is separated by the river Horyn' from the remaining two. In contrast to other sub-dialects, the Western Polissian dialect is not entirely pure in its northern make-up, since it has incorporated several features of the South Western variety (38). The North Ukrainian language variety is claimed to originally have covered a much larger area than nowadays (cf. Shevelov 1979, 755). Discussing the dialectal re-alignment by the 15<sup>th</sup>-16<sup>th</sup> c., Shevelov (1953) remarks that before their incorporation into the Grand Duchy of Lithuania, the Northern Ukrainian and Southwest Belorussian language varieties shared the core properties of the Old Kiev-Polissian dialect. Voznjak (1975) observes that such linguistic unity of Ukrainian and Belorussian language varieties was transplanted into the Middle period when the territories of today's Ukraine and Belorussia were united under the Grand Duchy of Lithuania. Especially after the Union of Lublin in 1569 both dialects co-exist in a narrow cultural and political unity within the Lithuanian principality. Consequently, it is not always easy to clarify the nationality of an author of the Middle period, since both Ukrainians and Belorussians in the Grand Duchy referred to themselves as *rusyny*, or „Ruthenians“ and employed the same literary language that consisted of the elements of both vernacular and Church Slavonic (3). Moser (2009) mentions another significant corollary of the Union of Lublin (1569): the massive settlement of Polish speaking citizens into the core territories of today's Ukraine, especially into Volynia and Podolia, led to the emergence of „Polszczyzna kresowa“, an extraterritorial language variety of Polish strongly influenced by Ruthenian (1380).

De Bray (1951) observes that the language variety spoken in Western Ukraine consists of dialects that are in their essence transitional to Polish (79). Shevelov (1979) divides the large South-Western group of dialects into North-of-Carpathian type and Carpathian type. The former is comprised of the sub-dialects below: the transitional Volhynian and Podolian dialects that can be traced back at least to Early Middle Ukrainian period; Dniester dialects that preserved the continuity of population and language, and also originate in the Old Ukrainian period; and Sjan dialects that were exposed to Polonization and have their origin in the Old Ukrainian period as well. The Carpathian group consists of 5 dialects: the Lemkian dialect, the Bojkian dialect, the Transcarpathian dialects, the Hucul dialects, and the Bukovyna-Pokuttia dialects. Lemk and Bojk dialects originate in the 13<sup>th</sup> c, Hucul and Bukovyna-Pokuttia – in the 14<sup>th</sup> c, and the Transcarpathian dialect was formed by the 16<sup>th</sup> c. (757-767).

As discussed in Shevelov (1979), the South-Eastern dialects cover the largest part of today's Ukraine: the sub-dialects spoken in Čerkasy and Poltava regions were formed in the 16<sup>th</sup> c; those spoken in Charkiv and Sumy regions – in the 17<sup>th</sup> c., while the sub-dialects of the southern part originated in the 18<sup>th</sup> c. The South-Eastern dialects are the most homogeneous due to their relatively recent rise and the mass migrations that accompanied their formation (38). The Eastern Ukrainian spoken in Central Ukraine, especially in and around Kiev and Poltava areas has served as the basis of the national standard because of its high social status at the time of standard's formation<sup>16</sup>. Usually it is claimed, e.g. by De Bray (1951), that in comparison to other Ukrainian dialects, the Ukrainian variety of Central Ukraine has more characteristics in common with Great Russian (79). The South-Eastern type, as observed by Hall and Koscharsky (2006), does not form a transition to any of the neighboring languages, and is viewed as the most authentic variety spoken in today's Ukraine, de facto it is a colonial variety of Ukrainian introduced into areas previously occupied by Turkic stems (140).

Since the Ukrainian dialects of the South-East are recent ones, the Ukrainian-Russian linguistic frontier between the south-eastern Ukrainian dialects and southern Great Russian dialects can be delineated with a certain degree of accuracy. But the precise linguistic boundary with contiguous Polish dialects in the West of Ukraine and with Belorussian in its North-West are not that easy to delineate. It is especially hard to draw a line between Ukraine and Belorussia, since North Ukrainian and South Belorussian historically belonged to one language variety. Neither it is easy to delineate the Ukrainian-Slovak linguistic boundary in Carpathians.

## **2.2. The language varieties of the Middle period**

### **2.2.1. Chancellery languages in the Duchy of Lithuania: Ruthenian, Polish and Latin**

Not only the Ukrainian literature of the Middle period (roughly 16<sup>th</sup>-18<sup>th</sup> c.) is largely multilingual, but each century seems to have had a lingua franca of its own. Coleman (1936,

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16 The Central Ukrainian dialects were not always regarded as prestigious though. Shevelov (1980) observes that there has been a shift in the status of Ukrainian dialects historically: „Meriting special attention is the progressive replacement, in the literary usage, of the dialects of the North and West of the Ukraine by those of the Southeast. This development, though insignificant in itself because the vulgar style was not part of the literary language, is important in the evolution of modern Ukrainian. In the writings from the seventeenth century, and even in the greater part of those from the eighteenth, the dialects of the North and the West predominate, to the extent that dialect features are admitted at all. The dialects of the Southeast assume importance only in the Romantic era in the works of Ivan Kotljarevs'kyj (1769-1838), Petro Hulak-Artemovs'kyj (1790-1865) and others, based on the dialects of Poltava, Kharkov and the southern part of the province of Kiev. This change was probably due to the political dismemberment of the Ukraine upon its third partition between Russia and Austria-Hungary (1793-1795) and to the economic and cultural decline of its northern and western regions, which turned Kiev, Poltava, and, in particular Kharkov, after the founding of its university, into the principal cultural centers“ (151).

11) describes the literary language of the 16<sup>th</sup> c. Ukraine as a Church Slavonic influenced by vernacular, while the official, or chancellery language of the time is often interpreted as a vernacular with Church Slavonic and Polish elements. De Bray (1951) defines the 16<sup>th</sup> c. chancellery language used on the territory of today's Ukraine and Belorussia as a form of Old Belorussian mixed with Church Slavonic that was not exempt from Ukrainian linguistic features (69). The Duchy of Lithuania benefits from the literary tradition of Eastern Slaves in general, and from their well established and highly codified chancellery language in particular: the overwhelming majority of 15<sup>th</sup> and 16<sup>th</sup> c. official documents, like court files and trial records in Lithuania were written in Ruthenian<sup>17</sup> (cf. Moser 1998, 11). Shevelov (1980) describes the administrative, or chancellery language of the 16<sup>th</sup> c. as *rus'kyj*, that he prefers to substitute for the term Ruthenian, to avoid its association with (Great) Russian (146). Another language employed in jurisdiction parallel to Ruthenian in the Duchy of Lithuania was Latin (cf. Moser 1998, 15)<sup>18</sup>. After the establishment of Polish-Lithuanian

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17 Moser (2009) observes that Middle Ruthenian is the equivalent of *staroukrajins'ka mova* (Old Ukrainian language) in modern Ukrainian terminology, while in Belorussian – the term *starobelaruskaja mova* (Old Belorussian language) is prevalent. At any rate this language variety is not identical with “Old Ruthenian” (cf. *starorususkij jazyk*, which is Middle (Great) Russian). Besides, the Ukrainian term *davn'orus'ka mova* and the Belorussian term *starażytnaruskaja mova* are in essence equivalents to the Old Slavonic (*drevnerusskij jazyk* in modern Russian terminology). Due to the ambiguity of the term *rususkij*, Moser (2009) suggests to use the term *drevnevostočnoslavjanski jazyk*, or Old Eastern Slavonic, instead (1369). Another term often used to describe the language variety spoken on the territory of today's Belorussia and Ukraine in 16<sup>th</sup> and 17<sup>th</sup> c. is *južnozapadnorusskij jazyk*, which Moser (1998) regards as problematic, since it implies that Ukrainian and Belorussian might be interpreted as dialects of Russian (11).

18 Strumins'kyj (1984) discusses the socio-political background of the Ruthenian chancellery language, its history and its downfall: “When Lithuanians, Poles, Hungarians, and Moldavians partitioned the Ukraine in the fourteenth century, they felt no particular obligation to use Slavonic and communicated with their new subjects in the local vernacular. [...] The first legal text in a purely Ukrainian-Ruthenian language was written in the northwestern Ukraine soon after 1341. It was compiled on behalf of the Lithuanian Prince Kestutis for German merchants from Toruń (20). The merchants probably knew Polish and therefore could also understand Ukrainian-Ruthenian. In Galicia, royal and private documents appeared in the local vernacular soon after the Polish conquest. Beginning in the late 1300s, even the Orthodox Moldavians had their documents in Bukovina written in a language more Ukrainian-Ruthenian than Slavonic. In Transcarpathia the first document in the vernacular dates from 1404. [...] Ruthenian was initially even preferred to the language of the conquerors in Lithuanian Ukraine and in Bukovina. The Lithuanian and Moldavian languages were used in some literary works from the sixteenth century on, but Lithuanian could not compete with older literary languages even in that later period (21). [...] By mid-16<sup>th</sup> c. chancellery Ruthenian had absorbed so many Polonisms that it had become almost a Polish language written in Cyrillic. Therefore the whole issue was, in fact, chiefly a matter of “script”. In 1568 Giulio Ruggieri observed that “the royal chancellery in Lithuania uses the Ruthenian language in writing, as the citizens do, with the exception of those who prefer to write in Polish.” He further described the difference in script as practically the only important distinction between Polish and chancellery Ruthenian, arguing that “[t]hey can be considered two dialects of the same language” (22-23). [...] After the Ruthenian chancellery language was banished by degree in favor of Polish in 1696, the fate of chancellery Ruthenian was more promising in the eastern Ukraine, where it dominated in the chancelleries of the Hetmanate from Chmel'nye'kyj through Apostol (1648-1734). However, chancellery Ruthenian eventually suffered the same fate as Ukrainian Slavonic. It gradually lost its Polonisms, and acquired many Muscovisms and even more Slavonicisms. More and more, Ruthenian was becoming a Ukrainian version of the secular branch of imperial Slavonic-Rossic (25). [...] The union of the eastern Ukraine with Muscovy worked against the use of Ruthenian-Ukrainian in the Orthodox Churches” (28).

Commonwealth in 1569 however, the language preference clearly shifted to Polish<sup>19</sup> (cf. De Bray 69-70).

The natural mode of expression for literate people in the 17<sup>th</sup> c. Ukraine was Polish, and, to a lesser degree, Latin and Greek (cf. Grabowicz 1981, 41). Polish becomes the language of both administration and secular writing. Shevelov (1980) mentions that the growing use of Polish outside of the administrative domain proceeded primarily at the expense of Church Slavonic, which was finally transformed into a dead language of church services<sup>20</sup> (149). The data below demonstrates the absolute predominance of Polish in the 17<sup>th</sup> c. administrative domain: “of one hundred and seventy-two Żytomyr books of municipal and court records written between 1582 and 1776, three are in Ruth[enian], thirteen in mixed Ruth[enian] and Polish, one in Latin, twenty-five in mixed Latin and Polish and one hundred and thirty in Polish” (Shevelov 1980, 148). Moser (2009) mentions that the Ruthenian chancellery language in the Grand Duchy of Lithuania grew unpopular already in mid-16<sup>th</sup> c. and was officially reinforced as a language of administration in the second Lithuanian Statute of 1566. Despite the official decree, the decades that followed witnessed the gradual downfall of the Ruthenian chancellery language till in 1696 Polish was declared the only official language on the territory of the dwarfed Polish-Lithuanian Commonwealth<sup>21</sup>. Moser (2009) further observes that the period of the downfall of the chancellery Ruthenian overlaps with the period of the flourishing of the new Ruthenian written language described as *prostyi ęzyk* “*rous’kjiy* by contemporaries (1380). Shevelov (1980) mentions that in this period the Ruthenian was gradually losing its Belorussian<sup>22</sup> coloring and adopting the features of local

19 The Polish influence was especially strong in Galicia since it had been the first Ruthenian territory incorporated into the Polish Crown already in mid-14<sup>th</sup> c. The Polish link is also strong in Bukovyna and Western Podolia, that together with Galicia formed the territory of the original principality of Galicia-Volynia in the 11<sup>th</sup>-13<sup>th</sup> century, the successor of Kievan Rus'. After the fall of Galicia-Volynia in mid-14<sup>th</sup> c., the territories of today's Ukraine were integrated into the Grand Duchy of Lithuania, and later into the Polish-Lithuanian Commonwealth. The most of the Ukrainian territories came under Russian control only after the partitions of Poland in late 18<sup>th</sup> c.

20 Still Čyževs'kyj (1997) defines the literary language of 17<sup>th</sup> c. Ukraine as a fundamentally Slavonic, which, however, having absorbed a large number of elements of the vernacular, did not follow any set norms, and manifested numerous deviations towards the vernacular, Polish, Russian and Church Slavonic. Such deviations have apparently been attested even within a single text (277-278).

21 Bunčić (2006) observes, i.a. after Kunert (1980) that the suppression of Ruthenian as a chancellery language by Polish that started with the Union of Brest in 1569 had a deep political undercover. Namely, while the Duchy of Lithuania that was leading a war against Muscovites in the north, failed to protect its southern territories of Volhynia from the Tatars, the Polish Crown successfully protected the population of Podolia from the Tatar invasion. Consequently, the representatives of Volhynia and Podlachia, a historical region nowadays shared between Poland and Ukraine, demanded in 1566 on the Vilnius sejm the union with the Polish Crown, which was granted to them in 1569 in the Union of Brest. The later attempts of the Duchy of Lithuania to win back Volhynia and Kiev failed due to the opposition of Volhynians themselves (75-76).

22 As already discussed in Wexler (1977), to distinguish „Belorussian“ features from „Russian“ and „Ukrainian“, especially in the pre-literary „Kievan“ period, is problematic (59). In the period of Grand Duchy of Lithuania it is equally tricky to identify texts as either „Belorussian“ or „Ukrainian“, since the large sectors of the both communities employed a common language variety. Consequently, it is not surprising that the

dialects (149). Hull and Koscharsky (2006) observe that by 1686, when Left-bank Ukraine fell under the Russian influence, „the Polish and Western European influences had already transformed the eastern varieties of the language to such an extent that the sense of owning the same language could persist among both Western and Eastern Ukrainians in spite of the political division“ (143).

### 2.2.2. The rise of *prostaja(ja) mova*, a new literary language based on vernacular

Shevelov (1980) labels the late 16<sup>th</sup>-17<sup>th</sup> c. Ruthenian used in both Western and Eastern Ukraine as *prostaja mova*, or the language of commoners. *Prostaja mova* was used “with a small Church Slavonic and substantial Polish admixture... in private letters, secular songs, memoirs, fictional tales, some chronicles... its status was low and its resistance to Polish intrusions feeble.” The modifier *prostyj* in the phrase *prosta mova* refers to its simplicity and the general comprehensibility of the new literary language in comparison to Church Slavonic (cf. Rabus 2008, 17). Besters-Dilger (2005) describes *prostaja(ja) mova* as the product of a complex language contact<sup>23</sup>. In fact several language varieties co-existed in the Grand Duchy of Lithuania: the chancellery Ruthenian, the vernacular of the Middle period, and – depending of the text type and in different proportions – Church Slavonic of Ruthenian recension; with Polish as a heavy superstratum to boot, due to its political and cultural importance in the Grand Duchy of Lithuania and later on in Polish-Lithuanian Commonwealth. Besters-Dilger further observes the necessity to differentiate between *prosta mova* used in original works and *prosta mova* employed in translations, since e.g. the Bible translations from the second half of the 16<sup>th</sup> c. contain an especially high number of Polish elements (102-103). Besters-Dilger (2005) does not identify *prosta mova* with the vernacular, observing that *prosta mova* was employed by Ruthenian nobility to distinguish themselves from Polish (104). On the basis of various texts that she investigated, Besters-Dilger (2005) has come to the conclusion that phonetics and phonology of *prosta mova*, even if not matching the spoken vernacular, are predominantly of Eastern Slavonic nature, with several Western Slavonic (Polish) phonological features attested as well (142-143). The syntax of *prosta mova* is classified by Besters-Dilger (2005) as predominantly Polish, which is especially visible in translations

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same texts and authors are currently being claimed by both peoples: 16<sup>th</sup> c. writers Symon Budny, Vasil' Cjapinski and Andrej Rymša are included both in the Barysenka's et al *Narysy pa historyi belaruskaj litaratury* (1956) and in Voznjak's *Istorija ukrajins'koi litaratury* (1921) (60). In light of close genetic ties between these language varieties, Pugh (1996) has suggested to bring Middle Belorussian and Middle Ukrainian texts together and investigate them as a sole language variety, „without regard for the origin of the author or their present identification“ (14). This take on the Middle period is also shared by Moser (2009).

23 Thomason (2001) defines language contact as “the use of more than one language in the same place at the same time” (1).

made from Church Slavonic into *prosta mova* (144)<sup>24</sup>.

Rabus (2008) interprets the rise of a new literary language, *prosta mova*, as the peculiar result of confessionalization<sup>25</sup>, or confession-building on the territory of today's Belorussia and Ukraine, with Jesuit Catholics and Orthodox Protestants competing for new spheres of influence in the 16<sup>th</sup> and 17<sup>th</sup> c. Lithuania. On such circumstances the Church Slavonic of the Ruthenian recension as used in the Duchy of Lithuania became the core target of Jesuit criticism against the Orthodox culture: it was labeled as degenerated, incomprehensible, and hindering the theological discussions (14). Both Besters-Dilger (2005, 103) and Strumins'kyj (1984, 10) observe that not only uneducated masses had the difficulty to understand Church Slavonic, but also the clergy and priests themselves<sup>26</sup> (15). *Prosta mova* was employed by authors of all denominations in Polish-Lithuanian Commonwealth: while both Orthodox and Uniates employed *prosta mova* in all types of non-liturgical texts, Catholics only employed it in polemics addressing Ruthenians (cf. Rabus 2008, 31-33).

With Polish playing a dominant role in society, the diglossic situation of the 16<sup>th</sup> c. (Church Slavonic vs. *prostaja mova*) was gradually replaced by triglossia toward the 17<sup>th</sup> c. (cf. Shevelov 1980, 149). Rabus (2008) however observes that the linguistic situation of 16<sup>th</sup> and 17<sup>th</sup> c. cannot be adequately described in terms of diglossia for several reasons. First of all, since Polish was widely used in the Grand Duchy of Lithuania, there are more than two language varieties in play. Besides, while Church Slavonic possessed a codified norm the deviations from which were hardly possible, the norms of *prosta mova* were flexible. Namely, there are linguistic phenomena of gradual transition among the varieties of *prosta mova* and within these varieties – each of these language varieties can be employed arbitrarily to satisfy stylistic needs imposed by a certain text type (39). Since *prosta mova* allows for a wide range

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24 Thomason (2001) has elaborated a universal Borrowing scale, that describes language contact stages of different intensity. The linguistic situation in the Grand Duchy of Lithuania would fit into the intense contact, envisioned as “very extensive bilingualism”, accompanied by “social factors strongly favoring borrowing”, namely “continuing heavy lexical borrowing in all sections of the lexicon, heavy structural borrowing. [...] Anything goes, including typological changes in the borrowing language. [...] In syntax, sweeping changes in such features as word order, relative clauses, negation, coordination, subordination, comparison, and quantification. In morphology, typologically disruptive changes such as the replacement of flexional by agglutinative morphology or vice versa, the addition or loss of morphological categories that do not match in source and borrowing languages, and the wholesale loss or addition of agreement patterns.” Thomason (2001) further observes that “languages that are typologically very different are likely to follow the borrowing scale closely, while languages that are typologically very similar are likely not to do so in all respects” (70-71).

25 Rabus (2008) employs the term confessionalization to designate both Reformation and Contra-Reformation in Europe of 16<sup>th</sup> and 17<sup>th</sup> c., when the Protestant and Catholic groups were competing for followers.

26 Strumins'kyj (1984) is quoting the Polish archbishop Stanisław Hozjusz, who in 1555 made the observation below: “Among Ruthenians neither Greek nor Latin is used for sacred things. But do any of the people understand anything that the priest pronounces? Most of it is not understood even by the priests themselves” (10).

of variation, while Church Slavonic does not, Rabus (2008) is inclined to envision the relationship of *prostaja mova* and Church Slavonic in the Grand Duchy of Lithuania as asymmetric rather than di- or triglossic (40).

Shevelov (1979) describes *prostaja mova* as a „vernacular koine“, or the language variety of low status, that was admitted neither into holy scripture, nor into poetry and drama of the learned circles in colleges and at the Kiev Academy. Church Slavonic alone was entrusted with these text types (567). In similar vein, Bunčić (2006) remarks that *prostaja mova* was employed almost exclusively for the (written) communication with poorly educated masses that did not understand Polish, Church Slavonic, Latin or Greek. Moreover, the authors who employed Ruthenian continuously apologized for doing so, justifying themselves with poor education and low morals of the population (73). Bunčić (2006) attributes the low prestige of Ruthenian i.a. to the absence of loyalty among the Ruthenian nobility, who increasingly preferred Polish over Ruthenian, commenting that such fondness of Polish was neither the result of imposition nor deliberate linguistic policy of the Poles. Even more, the Uniates themselves, especially the Eastern Slavonic Orthodox Basilian monks, were fueling Polonization of the Ruthenian society (75).

Already in Early Middle Ukrainian period it was no longer possible to keep the standards of Church Slavonic preserved, since the „[f]eatures of spoken, outright dialectal speech made many inroads in Ch[urch]Sl[avonic] writing“ (cf. Shevelov 1979, 394). Moreover, Church Slavonic of Ruthenian recension might even be classified as a variety of Ruthenian – at least in works by the Ruthenian grammarian Ivan Uževyč who integrated Church Slavonic elements in his Ruthenian grammar, as laid out in Bunčić (2006). Bunčić (2006) further observes, that if regarded as a sub-variant of Ruthenian, Church Slavonic must have been a language variety with at least „double-membership“, since it can also be regarded a variety of (Great) Russian. Such linguistic situation, Bunčić (2006) remarks, is known in the field of dialectology: a dialect spoken in two political formations might belong to various standard languages spoken in each of these formations (cf. Bunčić 2006, 146).

Shevelov (1980) mentions that there was revival of Church Slavonic in the early 18<sup>th</sup> c. that eliminated Polish as the literary language of those Ukrainians who had not yet been completely polonized by that time (150). He further remarks that the emerged situation was again diglossic: Church Slavonic (*jazyk slavenorosskyj*) vs. the vernacular (*prostaja mova*). In the Polish part of the Ukraine the diglossic situation with Meletian Church Slavonic and *prostaja mova* with a strong Polish admixture, was in tact throughout the entire 18<sup>th</sup> c. The Church Slavonic in late 17<sup>th</sup> and early 18<sup>th</sup> c. was no longer confined to liturgical domain, as it



seems to have been the case in the earlier periods of 16<sup>th</sup>-17<sup>th</sup> c., but was increasingly used in drama, poetry and theological writings (150). These two literary languages however seldom appeared in their pure forms, since „neither the educational level of most writers nor the then predominant style of Baroque in literature and life... allowed, with a few exceptions, the appearance of pure specimens written entirely in one of the polar languages“. We are dealing, after Shevelov (1979), with „an apparently countless number of combinations of the two in various proportions... nearly every text is mixed and transitional“ (569). Such situation, Shevelov (1979) claims, concerns the entire Middle Ukrainian period (571), that he defines as a time span from 1575 till 1720.

Besides, describing the language situation in the Russian part of the Ukraine, Shevelov (1979) observes that already in early 18<sup>th</sup> c., Russian „began making sweeping inroads as the written language of the Ukraine until U[krainian] components were reduced to occasional Ukrainianisms“ (33). Moreover, in the course of the 18<sup>th</sup> c., and especially after the disintegration of the Cossack state Hetmanate in 1764, Church Slavonic was, according to Shevelov (1980), de facto gradually substituted for Russian. Such transition was an easy one due to the important role of the Church Slavonic in the formation of literary Russian: the transition essentially implied a switch from one type of Church Slavonic to another. At the same time, Shevelov (1980) remarks that in Hetmanate, before it was dissolved, *prostaja mova* functioned as the language of central and local administration on the whole territory, and represented a solid foundation for the formation of a literary language. Even though it absorbed dialectal features, *prostaja mova* in Hetmanat exhibited a relatively high degree of standardization. Shevelov (1980) describes it as „a kind of administrative koine in the making“.

The use of *prostaja mova* was obviously in tact in the Cossack state till the introduction of the new administrative system by Catherine II in 1780 (150-151). As observed in the *Encyclopedia of Ukraine online*, the Ukrainian *prostaja mova* was additionally marginalized under the 18<sup>th</sup> c. Enlightenment theory of Lomonosov's three styles of literary language: high, middle and low. That is, at least the Ukrainian spoken in the territories directly dominated by the Russian empire was turned into the language of peasantry, and increasingly confined to the lowest register of burlesque and travesty. High style works like odes, elegies, tragedies, and scholarly writings were written in Russian, while the drama and prose that belonged into the middle style of literary writing were composed in a mixture of the bookish [Church Slavonic] and the vernacular spoken by literate people (cf. Danylo Husar Struk, *Literature*).

All in all, referring to the whole Middle Ukrainian period, Shevelov (1979) emphasizes the necessity of „[a]n individual approach in order to sort out alien components: Ch[urch]Sl[avonic] and P[olish] for all the period, R[ussian] for its final decades, less significantly some B[elo]r[ussian] in the early years. Even texts written in the *prostaja mova* should be scrutinized to see if a particular text reflects the vernacular koine, a specific dialect, or a deliberate (and sometimes distorted by exaggeration) mixture of dialects. The Ukraine of the time used two literary languages of her own in various combinations, and the written evidence should not be mistaken for a simple reflection of facts of the spoken language“ (571).

### **2.2.3. Was *prostaja* mova a codified variety with clear-cut norms?**

In contrast to Church Slavonic, the norms of *prostaja mova* were not codified via dictionaries and grammars. Rabus (2008) observes, i.a. after Bunčić (2006), that the supra-regional character of *prostaja mova* was aspired by the Ruthenian authors themselves, which is obvious from their striving for a uniform orthography and their non-acceptance of clearly dialectal features. Moreover, the older Ruthenian texts were interpreted as authoritative: their style and their language were imitated, even though in isolated cases such imitation implied including dialectal features of marginal dialects. Since the Ruthenian was standardized via authoritative texts, one could speak of standardization via custom (35). Church Slavonic elements elevated the style of Ruthenian texts, generating their high register and securing their good standing (37).

Rabus (2008) further observes that in sharp contrast to Church Slavonic, the standard of *prostaja mova* was a flexible one: it was not obligatorily codified in a certain way – parallel variants of a linguistic variable co-exist, that are either synonymous or stylistically differentiated. Such parallel variants of the same phenomenon can be observed on phonological, morphological and lexical levels and represent either Polish or Church Slavonic elements (37). Besides, such fluctuating norms allow for the hybridization of a Ruthenian text and its smooth transition into Polish and Church Slavonic: there are heavily polonized varieties of *prostaja mova*, as well as *prostaja mova* with a significant number of Church Slavonic elements. The prestige of the *prostaja mova* was consequently dependent on the type of the Ruthenian sub-variety used. Rabus (2008) mentions however that *prostaja mova* and *Church Slavonic* did not build a single continuum of the two language varieties crossing over, but were clearly separate (38). Such is also the take of Besters-Dilger (2005), who, on the basis of numerous texts written in both *prostaja mova* and Church Slavonic that she investigated, has

demonstrated that these two language varieties as a rule were not mixed in works edited by the Ostroger academy print office in the 16<sup>th</sup> and 17<sup>th</sup> c. (146).

To figure out in how far *prosta mova* met the norms of a literary language, Bunčić (2006) discusses its functions in light of criteria laid out in Garvin (1959). We reproduce some of the discussion below. The *unifying function* of Ruthenian as a written language of all Ruthenians is satisfied, because both Vilnius and Lemberg enjoyed the same written norms. The same is true in case of Polish, since it was spoken by educated people of all religious denominations in the whole Polish-Lithuanian Commonwealth, which means that Polish might have had a higher unifying status than Ruthenian. Another feature of a standard language – *separatist function* – is satisfied by both Polish and Ruthenian, but in different ways: Polish allowed for more pronounced separation from Muscovites, than Ruthenian; only Ruthenian allowed for separation from both Muscovites and Poles and thus supported Ruthenian identity. Still, the demarcation from Polish was due to Cyrillic alphabet alone, not to the Ruthenian language itself (73). One more significant function – the *frame-of-reference function* in case of poetry – cannot be applied here, since the Ruthenian poetry was not widespread – poems were predominantly written in Polish, Latin or Church Slavonic (72-74).

#### 2.2.4. In how far did *prosta(ja) mova* shape (Great) Russian *prikaznyj jazyk*?

In contrast to the syntactic peculiarities of *prosta mova* that are generally recognized as bearing pronounced Polish features, its morphological features are classified by Besters-Dilger (2009) as typical of *prikaznyj jazyk*, or the chancellery language of the Russian administration of the 16<sup>th</sup> and 17<sup>th</sup> c. (144). Besters-Dilger (2009) observes that *prosta mova* has shaped the syntax of *prikaznyj jazyk* as well. Namely, the 16<sup>th</sup> and 17<sup>th</sup> Middle Russian *prikaznyj jazyk* employs the construction of the type *tam konnych ljudej*<ACC/GEN\_pl\_anim> *pobito*<NTF>, that is the accusative assigning *-no*, *-to* headed by accusative-genitive plural animates. Besters-Dilger (2009) is inclined to believe that this structure must have been borrowed from Polish or Ukrainian into (Middle) Russian, even though it has also been attested in Western-Russian dialects (1362). The *-no*, *-to* headed by accusative-genitive NP, Besters-Dilger mentions, is regarded as a Polonism by Pennington (1980, 336) as well (1362).

Besters-Dilger (2005) does not identify the Middle Russian chancellery language with vernacular, observing that these two language varieties only partially intersect, e.g. in lexis. She further observes that the language of *prikazy* was employed to secure the power and was not meant to be reproducible by the population, it was bound by [Church Slavonic] tradition, conservative, inflexible, lexically limited and register dependent (1352; 1364). The very fact

that the chancellery language of the Middle Russian period is frequently described as *prikaznyj jazyk* in literature, „indicates that the idiom of the prikazy (government agencies), founded at the end of the 15<sup>th</sup> century, set the standard since the mid-16<sup>th</sup> century“ for all types of official documents (1352). Besters-Dilger (2009) further observes that the term *prikaznyj jazyk* originally referred solely to the administrative language variety of *prikazy*, that had been created by tsar Ioann III at the end of the 15<sup>th</sup> c. Initially *prikaznyj jazyk* was a sub-type of chancellery language of limited usage. Due to the growing centralization of the Tsardom of Russia, the importance of *prikazy* was growing, so that the *prikaznyj jazyk* gradually became the role model of chancellery language in the whole north-eastern Russia. While in the first half of the 16<sup>th</sup> c. the chancellery language on this territory still varied according to the regional phonetic and lexical peculiarities, the differences disappear in mid-16<sup>th</sup> c. (1353).

Moser (1998) observes, i.a. after Issatschenko (1980) that scribes, translators and clerks of *Posol'skij prikaz* that employed *prikaznyj jazyk* were predominantly Ukrainians and Belorussians<sup>27</sup> born on the territory of today's Western Ukraine and Belorussia, and educated in Kiev, at times not even fluent enough to produce uncontaminated (Great) Russian and Church Slavonic texts (23-24). Such influx of non-Russian erudites produced in the second half of the 17<sup>th</sup> c. a complete Ukrainization of Moscow's religious and secular life (29). Generally, it is believed that the influence of *prosta mova* on the formation of the standard literary Russian was more substantial and far reaching than on the formation of modern literary Ukrainian and modern literary Belorussian (Uspenskij 1987, 263; 275).

### 2.3. Periodization of the Ukrainian literature

Periodization of (Middle) Ukrainian literature is no easy task, and to fairly tackle it in this empirically oriented work is beyond our competence<sup>28</sup>. Apart from its general complexity due to its multilingual nature, the history of the Ukrainian literature has been furthermore exposed to deliberate social and political manipulations, especially within the Soviet Union. Grabowicz (1981) observes that “Soviet histories of Ukrainian literature, inevitably authored by committee, mirror the historical literary process with peculiar distortion. While bending

27 Among these Moser (1998) mentions the following West Ukrainian/Belorussian erudites: Pletenec'kyj (1550-1624), Iov Borec'kyj, Pamva Berynda (?-1624), Zacharij Kopystens'kyj (?-1627), Meletij Smotryc'kyj (ca. 1572-1630), Kyryll Trankvilion-Stravrovec'kyj (?-1647), Stefan Zyzanij (?-1621), Jepifanij Slavynec'kyj (?-1675), Arsenij Satanovs'kyj (?-ca. 1653), Stefan Javors'kyj (1658-1722), Simjaon Polacki (1629-1680). The Eastern Ukrainian erudites Dmitrij Tuptalo (1651-1709) and Feofan Prokopovyč (1681-1736) influence the Moscow culture later on (29-30).

28 Grabowicz' (1981) observes that „[a] scholarly account of entire, complex history of the [Ukrainian] literature, which could serve as a reference guide for further study and at the same time offer a critical interpretation of the development of the literature from the 11<sup>th</sup> to 20<sup>th</sup> centuries is, to our knowledge, yet to be written“ (41).

the overall contours and filtering out disharmonious facts, they mostly treat what they do see with the dull tools of vulgarized theory and ideological dogma.” (1). Further, Grabowicz (1981) remarks that in “Eastern Europe, and particularly in the lands of the old Russian empire, literature and politics are bedfellows...” (100). Grabowicz (1981) concludes though, that for “all the shadows on the Soviet scene, in the West the state of scholarship in the history of Ukrainian literature has been much worse, in fact, virtually non-existent” (2). Still, there are several Soviet and non-Soviet accounts of the periodization of the Ukrainian literature worth examining of course. We offer some of them below<sup>29</sup>.

A prominent non-Soviet literary historian Čyževs'kyj (1997) divides the history of the Ukrainian literature into eight periods: the period of Monumental Style; the period of Ornamental Style; 14<sup>th</sup> to 15<sup>th</sup> centuries; Renaissance and Reformation; Baroque; Classicism; Romanticism; Realism. Čyževs'kyj (1997) believes that in face of magnificent Old Kievan period, the Ukrainian literature of the 16<sup>th</sup> c. is of limited significance altogether (242); apparently the Renaissance touched Ukraine only at the very end of its development, and that by way of Polish culture (238-239)<sup>30</sup>.

*Encyclopedia of Ukraine online* offers a conciser periodization of Ukrainian literature: The Kyivan period (10<sup>th</sup>-15<sup>th</sup> c.), The Cossack or the Middle period (16<sup>th</sup>-18<sup>th</sup> c.)<sup>31</sup>, Vernacular literature (19<sup>th</sup> c.), The Renaissance of the 1920s and The pre-independence period. The literary language of the Cossack period is described as a “bookish language, which in the 18<sup>th</sup> century came under the strong influence of the Russian language and consistently grew farther away from the vernacular” (cf. Danylo Husar Struk, *Literature*).

Shevelov (1979) takes the year 1387 as a cut-off date for the Old Ukrainian period<sup>32</sup>, the year „when the long lasting P[olish] occupation of Lvov and Halyč began, and the main center of Volhynia, Luc'k received the Li[thuanian] ruler, Prince Vitautas“ (203). The year 1387 thus marks the beginning of the Early Middle Ukrainian period, that lasted till 1574, the

29 We skip the purely socio-political accounts of periodization of Ukrainian literature, like that of Ahapij Šamraj (1928) from Charkiv, who distinguishes the following periods: the feudal period (11<sup>th</sup>-13<sup>th</sup> c.), the period of the developing market capitalism (15<sup>th</sup>-17<sup>th</sup> c.), the period of agrarian capitalism (18<sup>th</sup> -1<sup>st</sup> half of 19<sup>th</sup> c.), emergence and development of industrial capitalism (19<sup>th</sup> c.), the period of financial capitalism (beginning of the 20<sup>th</sup> c) and the period of social revolution and proletarian literature in Ukraine.

30 Grabowicz (1981), in contrast, claims that the Renaissance, Humanism, and the Reformation in the 16<sup>th</sup> c. Ukraine constituted a “vibrant and fruitful phase in the cultural life” of a multinational state (1).

31 Even though the Middle period, plainly described as the Cossack period lasted well into the 18<sup>th</sup> c, it started to decline after the Cossack-Polish war (1648-1647), and the subsequent Perejaslav Treaty (1654) which secured Bohdan's Cheml'nyc'kyj's State Hetmanat the military support of the Tsardom of Russia. In 1667 the Treaty of Andrusovo divided Ukraine between two states: the Left-bank Ukraine with Kiev was annexed by the Tsarist Russia, while the Right-bank territories continued within the confines of the Kingdom of Poland and the Grand Duchy of Lithuania.

32 The Old Ukrainian period lasted, after Shevelov (1979, 203), approx. three to four centuries, similar to the Proto-Ukrainian that also lasted about four centuries, from the 7<sup>th</sup> till the 11<sup>th</sup> c.

year when *Apostol* and a Primer were published for the first time (388). The Middle Ukrainian period is defined by Shevelov (1979) as a time span from 1575 to 1720 (560). The year 1720 has been taken as a watershed probably due to the fact that from now on the printing of Ukrainian books was prohibited by decree.

### 3. Theoretical preliminaries

#### 3.1. Indo-European roots of *-no*, *-to* and their further development in Slavonic

##### 3.1.1. Related constructions in Latin, Greek and Common Slavonic

Siewierska (1988) observes that the “origins of the Slavic *-no/-to* participle can be traced to the Proto-Indo-European nominalizing participle suffix *\*-to* the reflexes of which are used to form passive participles in many branches of Indo-European. In Proto-Slavic the *-to* suffix was attached to roots ending in *i*, *er*, *el*, *em* and *en*, the *-no* suffix to roots ending in *ě* and *a*. Other roots took the suffix *-enŭ*” (270). Blevins (2003) remarks that Slavonic *-no*, *-to* forms, despite their formal resemblance to passive participles and the general assumption of their genetic link to neuter singular forms, historically might in fact have originated as a voice-neutral affix. Below are the features that the Indo-Europeanist Szemerényi (1996, 323) associates with these forms: “The suffix *-to-* is widespread in all I[ndo]E[uropean] languages except Anatolian and Tocharian [...]. In the later history of the languages, there is a tendency to restrict the formation to passive use [...]. The original lack of voice differentiation is, however, quite clear [...] in the Latin deponent the *-to-* formation regularly has active meaning” (cited in Blevins 2003, 488).

Brajerski (1995) observes that Slavonic *-no*, *-to* construction goes back to the Indo-European impersonal structures with a predicate in agreement with a covert 3<sup>rd</sup> person singular argument, cf. lat. *Dies noctes que estur*<3rd\_PPP>, *bibitur*<3rd\_PPP> „\*It is eaten and drunk day and night/One eats and drinks day and night“ (Plautus); *Sic itur*<3rd\_PPP> *ad astra* „\*This is how it is gone to the stars/This is how one goes to the stars“ (Virgil); *Acriter pugnatum*<3rd\_PPP> *est* „\*It was fought ardently/One fought ardently“. Such Latin predicates denoted human action and were usually formed from intransitive verbs like lat. *itur*<3rd\_sg\_PPP>, *ministratur*<3rd\_sg\_PPP>, *pugnatur*<3rd\_sg\_PPP>; they referred only to actions and states performed by the humans. These structures were used to communicate the action as such, or the state as such, without emphasizing the person(s) who caused them. The core argument was usually known from the context and it could be expressed in oblique phrases, either in the shape of a

bare instrumental or in the form of prepositional phrases. Such agent expressions are especially frequent in Sanskrit, cf. *gamyate maya*<INST> „it is gone by me/I am gone“; *supyate traya*<INST> „it is slept by you/you are asleep“; *gatam amena*<INST> „it was gone by him/he was gone“. Related constructions are also attested in Old Polish, cf. *O ktore rzeczy od Żydowki żalowano*<NTF> *na mię* (481). If there is no agent expression, the implied subject in such structures could refer to any person(s), including the speaker and the listener, cf. the Latin verb form *bibitur*<3rd\_PPP>, which not only means „it is drunk by somebody known from the context“, but also „it is drunk by me/by you“, etc., depending on the situation. Brajerski (1995) further observes that such Latin structures correspond to modern Polish predicates of the type *Często się o tym mówiło*, and are distinct from predicates in *-no*, *-to* of the type *jedzono*<NTF> and *pito*<NTF>, since the latter can only refer to the 3<sup>rd</sup> person singular or plural, while the former do not pose such a restriction on the implicit agent (482).

Brajerski (1995) does not agree with the hypothesis of Miklosich (1883) and Österreicher (1926), who, on the basis of related constructions in Latin and Greek, claim that it was the direct object complement marked with accusative in the structure of Slavonic passive *-no*, *-to* that triggered their re-interpretation into finite verbs. Brajerski (1995) observes that the related predicates in Latin and Greek are only passive in form, not in meaning, mentioning an awkward translation from Greek, namely the record *Glas"*<NOM/ACC\_m\_inan> *truby uslyšano*<NTF> *budet'* that was taken by Miklosich (1883) to argue for the presence of accusative assigning *-no*, *-to* predicates in Church Slavonic. As already extensively discussed elsewhere, i.a. in Shevelov (1969), this record is a word for word translation from Greek *σάλπιγξ φωνή*<NOM> *ἀκουστον*<PPP> *ἔσται*<AUX> „the voice of the trumpet will be that/something, that will be heard“, with *glas* in nominative, not in accusative (480).

Brajerski (1995) further mentions that while the accusative assigning constructions of the type *No iz Perekopa tech nogajskich Tatar wygnano*<NTF> are attested in Old Russian texts, they are clearly absent from South Slavonic languages, as well as from Tschech and Slovak. The absence of *-no*, *-to* predicates in the standard modern Russian and several Russian dialects is interpreted by Brajerski (1995) as the Church Slavonic, or, essentially, South Slavonic interference. Such distribution of *-no*, *-to* across Slavonic languages suggests that the process of activization of *-no*, *-to* predicates might have started already in the 5<sup>th</sup> c., after the South-eastern and South-western Slavonic tribes crossed Carpathians (480). Speculating over the age of Slavonic *-no*, *-to* predicates, Brajerski (1995) offers a sophisticated theory based on the category of aspect to clarify the circumstances and the approximate time of construction's

origin. Brajerski (1995) observes that *-no*, *-to* predicates historically always designated simple past, regardless whether formed from perfective or imperfective verb stems, or whether the auxiliary *jest* was present or absent in their structure, while agreeing passive participles formed from imperfective stems could only refer to the action in present. That is, the structure *wzyvano*<NTF\_impf> *go jest* and the structure *wezvano*<NTF\_pf> *go jest* both designated the simple past, while the passive participles of personal sentences, e.g. *wzywan*<PPP\_impf> *jest* and *wezwan*<PPP\_pf> *jest* designated present and past tenses respectively. Brajerski (1995) further argues that had the meaning of *-no*, *-to* forms shifted from passive to active in historical times, the *-no*, *-to* predicates formed from imperfectives would have designated the present tense nowadays (479). Crucially, Brajerski (1995) argues that since *-no*, *-to* forms historically could be formed from both perfectives and imperfectives, they were established at a time when the category of aspect had not yet been fully developed (479). Since the Common Slavonic had a pronounced aspectual system already in the 10<sup>th</sup>-11<sup>th</sup> c., which means that at this time passive past participles in *-(e)n* and *-t* were already formed only from perfectives, while present participles in *-m* from imperfective verbal stems, cf. *rečen*", *udaren*", *začęť*" vs. *vědom*", *popirajem*", *vidim*", Brajerski (1995) is inclined to put the establishment of *-no*, *-to* structures into a time span before the 10<sup>th</sup> c. (480). Besides, Brajerski (1995) concludes that active predicates of the type *jedzono* and *pito* in Polish are as archaic as participles in *-qcy*, *-qc* and *-wszy/-lszy*, instrumental pl *rękoma*, *oczyrna*, *uszyrna*, *przed laty*, conjunctions *albowiem*, *bowiem*, *ponieważ*, *gdyż*, *atoli*, and the particle *li* in *li tylko*, etc (486).

The idea of emerging grammatical aspect as an important factor in the re-analysis of Slavonic *-no*, *-to* predicates is also shared by Filin (2006), who observes that agreeing *-no*, *-to* forms were already employed in Old Russian system of past tenses<sup>33</sup> to designate the passive

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33 Černych (1952) observes that Old Russian employed four tenses to describe events in the past: two simple tense forms of aorist and imperfect, and two compound ones – perfect and pluperfect. The perfect is a compound past tense, formed from the auxiliary *esm'* and a passive participle, or *l*-participle, employed to emphasize the result of the past action relevant for the moment of speaking. Initially, the core function of the perfect was to emphasize the doer of the action. This primer meaning of the perfect was soon lost though, intermingling with the meaning of aorist and imperfect. The spread of perfect was i.a. due to the fact that it could admit both perfective and imperfective verbs. The auxiliary *esm'* was increasingly dropped, first in the 3<sup>rd</sup> person singular, later in other forms (224).



meaning of a clause. Already in the time before the written records, aorist<sup>34</sup> and imperfect<sup>35</sup> gradually begin to be displaced by the perfect, an analytical form consisting of an auxiliary and a passive past participle in *-l*, whose original function was to denote a past action in its relevance to the present (491). Describing the decay of the old tense system, Borkovskij (1963) observes that imperfect was the first tense to fall into disuse. The next was aorist, the tense designating a simple past action, which was first lost in the southern, and then in the northern territories (277). The pluperfect that has been retained in modern Ukrainian, fell out of use in (North) Russian dialects already by the second half of the 16<sup>th</sup> c. After the loss of imperfect and pluperfect, perfect was the only tense to convey the past actions. Originally formed from perfective verb stems, perfect could now be formed from the imperfective verb stems as well. This way perfect could convey any past action – perfective, imperfective, iterative, which led to the complete displacement of aorist<sup>36</sup> (281). Parallel to the processes described above, the grammatical aspect was emerging – the difference between perfective and imperfective verbs was growing stronger. Already by the 14<sup>th</sup> c. the aspect in Old Russian turned into a productive category carried out by prefixes added to the verbal stems (289). Filin (2006) argues that such re-arrangement in the system of past tenses and the establishment of the grammatical aspect as a pronounced category, has resulted in a new syntactic role for *-no*, *-to* forms that were re-interpreted into active predicates of clauses with direct object complements especially typical of modern Ukrainian.

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34 Černych (1952) assumes that aorist was inherited from Indo-European and was initially employed, like in ancient Greek, to describe short-term past events of perfective nature. Already in the 13<sup>th</sup> and 14<sup>th</sup> c. aorist was increasingly used to designate any past action. Whereas initially aorist admitted both imperfective and perfective infinitival stems, the perfective verb stems clearly prevailed, becoming the only acceptable stem type in Old Russian. It is believed that the vernacular was already aorist-free in the 12<sup>th</sup> and 13<sup>th</sup> c. The chancellery language of Moscow of 14<sup>th</sup> and 15<sup>th</sup> c. does not employ aorist forms either, save its modified remnant *by*, used as a modal particle in modern Russian and Ukrainian. The bookish style, however, has kept aorist forms long after this period. The use of aorist was furthermore revitalized due to the second South-Slavonic influence in the 14<sup>th</sup> c. (219ff). Borkovskij (1963) observes that aorist must have been lost in Novgorod dialects already by the 13<sup>th</sup>-14<sup>th</sup> c., since it is absent from both Novgorod trial records, as well as from related documents from Moscow region of the period (279).

35 Černych (1952) observes that imperfect was initially used to designate durative and occasionally repetitive past actions. This simple tense form was formed almost exclusively from imperfective infinitival and rarely present tense verb stems. The Old Russian imperfect differs substantially from Old Church Slavonic imperfect in its flexions, i.a. the double Church Slavonic vowel combinations *aa* and *ěa* were reduced to *a*; Church Slavonic imperfect flexions codifying 2 pers. plural *-šete*, 2 pers. dual *-šeta* and 3<sup>rd</sup> pers. dual *-šete* appear in OR in the shape of *-ste* (2 pers. pl.) and *-sta* (2-3 pers. dual) (223). Černych (1952) assumes that this tense form designating progressive past actions was attested in Old Russian period both in written records and in vernacular. Absent from *Russkaja pravda*, it is still attested in later works, like those by Volodymyr Monomach, in *Slovo o polku Igoreve*, *Molenie Daniila Zatočnika*. The vernacular might have lost it already by the 13<sup>th</sup> c. (224).

36 The process of displacement of the old forms by perfect run unevenly in the grammatical category of the person, e.g. the 2<sup>nd</sup> person singular form of aorist was displaced first (Borkovskij 1963, 281).

### 3.1.2. Origins of the Polish *-no*, *-to*

Brajerski (1995) observes that Proto-Slavonic had two types of periphrastic passive: one was an analytical form consisting of the auxiliary *byti* and a participle in *-n* (*-a*, *-o*), or in *-m* (*-a*, *-o*), e.g. *rekomo jest*" and *rečeno jest*"; another was a reflexive structure like *rekti sę*, *roditi sę*. Taking into consideration the initial absence of the pronounced aspectual system in Polish, Brajerski (1995) assumes that present participles were employed to designate events in the present, while past participles designated events in the past respectively. Moreover, participles in *-m* combined with the auxiliary *byti* designated eventive passive, while participles in *-(e)n*, *-t* designated the resultative, or stative passive. The only forms that could designate both eventive and resultative passives were structures consisting of participles combined with the present auxiliary *jest*", e.g. *rečeno jest*", that could refer either to the present, or to the past. The only remnants of the participles in *-m* in modern Polish are, according to Brajerski (1995) the modal verb *wiadomo* and the modal expression *rzekomo* in its original meaning of „jest mówione“ lub „mówi się“ (482).

The participial forms in *-(e)no*, *-to* that designated the stative passives were also employed as adjectival predicates. Such adjectival predicates, if headed by a neuter singular noun, ended in *-o* and were employed as adverbs, e.g. *Słodko i zaszczytnie* (initially *zaszczytno*) *jest umrzeć za ojczyznę* as the equivalent of lat. *Dulce et decorum est pro patria mori* (482). Brajerski (1995) further argues that the adverb *wolno*, i.e. in *Wolno mu było wyjść* has evolved from the *-no*, *-to* participle *pozwolono*. Brajerski (1995) suggests that it was the adverbialization of *-no*, *-to* predicates that segregated the *-no*, *-to* forms from the declinational paradigm of long form adjectival participles. Moreover, *-no*, *-to* predicates that designated both events and states came to be linked to the ontological, indefinite implicit subject of the impersonal finite clauses (483). Such adverbial participles in *-o* could only designate the past; and could only co-occur with the auxiliaries *jest* and *było*, but never with tense marking auxiliaries *bywa(ło)*, *będzie*, *bądź*, *byłoby* and *być*. The passive *-no*, *-to* predicates could be used with any auxiliary type and held, especially when used with the auxiliary *jest*, the *-no*, *-to* predicates within the passive paradigm, i.e. *pisano jest* „jest pisane“, *pisano będzie* „będzie pisane“. It is the auxiliary drop in the structure of the passive *-no*, *-to* predicates in the 17<sup>th</sup> c. that triggered the re-interpretation of passive-participial *-no*, *-to* forms into finite active verbal forms (483-484).

The impersonal predicates in the Indo-European passive structures designated actions and states of all persons; there was no restriction on the grammatical person, gender or

number of the implied doer of the action. Thus the impersonal predicates could also designate the speaker and the listener, most frequently however – out of pragmatic reasons – they designated the 3<sup>rd</sup> person(s) singular or plural. Since Common Slavonic had two types of passive structures, the meaning described above could be expressed either via reflexive structure, e.g. *rečeti" se* or in the *-no, -to* structure, e.g. *rečeno jest"*. While the reflexive structure beheld the original Indo-European meaning, the *-no, -to* predicates were restricted in their use to the 3<sup>rd</sup> person singular or plural. Brajerski (1995) suggests that such differentiation between two structures was already available at the beginning of the Proto-Slavonic period, observing that the meaning of *-no, -to* predicates in Old Polish records is already identical with that of modern Polish *-no, -to* (484).

Brajerski (1995) concludes that the process of activization of *-(e)no, -to* was first attested in the impersonal sentences of the type *Tę drogą wtedy nie jeżdżono*<NTF> whenever used without the overt present copula *jest*. The predicates in such structures could be formed from both transitive and intransitive verbs. The transitive verbs might have had the direct object complement in their structures; those with such an object gave rise to the accusative assigning *-no, -to* structures of the type *Schwymano*<NTF> *złoczyńcę*<ACC\_a-decl>. Finally, the nominative neuter subjects in sentences like *Zaorano*<NTF> *pole*<ACC/NOM\_n> might have been re-interpreted into direct object complements, which, however, was not always the case (484). In similar vein, Pisarkowa (1984) suggests i.a. after Österreicher (1926) and Klemensiewicz (1965) that Polish *-no, -to* predicates begin to function as active finite verbs with morphological accusative only after the disappearance of the copula from their structure in the 17<sup>th</sup> c. (41-42).

A different process of *-no, -to* development is outlined in Klemensiewicz (1965), who observes that impersonal *-no, -to* predicates of the type *chwalono*<NTF> *bohaterską postawę*<ACC\_a-decl> *żołnierzy* in modern Polish were initially employed as regular passive-participial forms in periphrastic passives. Pondering over the question of how the passive meaning of *-no, -to* forms shifted to active, Klemensiewicz (1965) argues that it was the syncretic reading of the neuter nouns in the NP that triggered the re-analysis of a two-member *-no, -to* structure into the impersonal one. Since such two-member *-no, -to* constructions co-occurring with the copula *jest* were restricted to the past tense, they originally had the meaning equivalent to modern Polish periphrastic passives in *-ne, -te*. The present auxiliary *jest*, that was used to designate the past, was often left out in structures with neuter nouns in the NP, e.g. *a popędzono*<NTF> *sierce*<ACC/NOM\_n> *ludzkie ku działaniu* (=popędzone zostało serce ludzkie ku działaniu); as well as in periphrastic passive structures with masculine singular

nouns in the NP, e.g. *i pobit<PPP> Judas od Izraela (został pobity)*. Besides, the process of auxiliary drop in *-no*, *-to* structures was reinforced by the parallel phenomena of the auxiliary drop in the 3<sup>rd</sup> person singular masculine and feminine structure, that transformed the diachronic structures like *chodził jest*, *niosła jest*, *leżało jest* into contemporary forms *chodził*, *niosła*, *leżało* (432).

Klemensiewicz (1965) makes an attempt to explain the presence of accusative marking on the direct object complement in a passive participial *-no*, *-to* structure drawing on 3 contemporary constructions below: 1.) *ta książka bywa czytana z zajęciem*; 2.) *ta książka czyta się z zajęciem*; 3.) *tę książkę czyta się z zajęciem*. The construction in 1.) is passive and its subject is marked nominative; the construction 2.) is passive in meaning, but reflexive in form, its subject is marked nominative as well; construction 3.) is non-passive, or active in meaning, but reflexive in form, and it is impersonal. Klemensiewicz (1965) argues that the subject in 1.) and 2.) functions as a direct object complement. Similar to how the appearance of accusative *książkę* in 3.) changes the meaning of the form *czyta się* from passive in 2.) to active in 3.), the presence of the direct object complement in *-no*, *-ono*, *-to* forms provokes their re-interpretation into active finite structures despite their initial passive meaning (434).

Still, the Middle Polish *-no*, *-to* exx with a past tense marking auxiliary in the structure are interpreted by Klemensiewicz (1965) as unambiguously passive constructions, equivalent to *było uchwalone* and *było nalezione* in contemporary Polish e.g. *Synod, na którym uchwalono<NTF> było<AUX\_past>, iż kacyrski krzest nie waży; Na synodzie afryckim przez Cypriana św. i wiele innych ś. a zacnych biskopow naleziono<NTF> było<AUX\_past>* (434). If however the auxiliary is absent from the structure of *-no*, *-to*, sentences, e.g. *iż sie nic nie godzi przykladać, ani ujmować temu, co<ACC/NOM\_pron> raz uchwalono<NTF> i przyjęto<NTF> w kościele; a wszakoż nie leda jako ma być odmieniono<NTF>, cokolwiek raz w kościele postanowiono<NTF>* such structures could also be interpreted as finite ones. Klemensiewicz (1965) further argues that structures like *co<ACC/NOM\_pron> raz uchwalono<NTF> i przyjęto<NTF>* could be understood as either passive, equivalent to modern Polish *co raz (zostało) uchwalone i przyjęte*, or as active finite ones, cf. *co raz uchwalilo się i przyjęło*. Klemensiewicz (1965) believes that the presence of such structures with ambiguous either-active-or-passive reading fueled the transformation of passive *-no*, *-to* into active predicates (434). Klemensiewicz (1965) assumes that in the syntactic environment with a missing auxiliary *-no*, *-to* ceased to be interpreted as passive and fell out of the system of participial conjugation, while the structural accusative fostered their re-analysis into finite, personal, transitive verbs with indefinite 3<sup>rd</sup> person plural interpretation. It is believed that *-no*, *-to* had

already been re-interpreted into active predicates by the mid-17<sup>th</sup> c. Such *-no*, *-to* are completely alien to Polish dialects (435).

Brajerski (1995) criticizes the hypothesis of Polish philologist Klemensiewicz (1965/1971) who claims that accusative assigning finite *-no*, *-to* derive from Polish agreeing structures of the type *Zamknięto*<NTF> *okno*, *Policzono*<NTF> *to wszystko*, that is from personal sentences with neuter nouns in the NP, pointing out that such neuter structures in Old Polish could function as both active and passive-participial predicates. Brajerski (1995) further suggests that the passive participle in agreement with its neuter subject, or patient, in fact strongly supported the original passive reading of the predicates in *-no*, *-to*. Besides, the exx investigated by Brajerski (1995) give him an impression that it is not the constructions of the type *Zamknięto*<NTF> *okno* that gave rise to the constructions with morphological accusative, e.g. *Schwytano*<NTF> *złoczyńcę*, but vice versa, structures of the type *Schwytano*<NTF> *złoczyńcę*, once re-interpreted into active finite predicates, brought confusion into the reading of the agreeing participial structures like *Zamknięto*<NTF> *okno* (481).

One more traditional philological account on the rise of *-no*, *-to* is Kuraszkiewicz (1981), who observes that predicates in *-no*, *-to* initially occurred with tense marking auxiliaries and functioned either as predicates of personal clauses headed by a neuter singular noun in nominative, cf. *dziecko*<ACC/NOM\_n> *jest*<AUX\_pres> *chwalono*<NTF>; *zarządzenie*<ACC/NOM\_n> *było*<AUX\_past> *dano*<NTF>; or as impersonal *-no*, *-to* clauses headed by NPs syncretic between nominative and accusative, or sometimes as a single member of the NP, that is without any head noun, i.e. *tobie to*<ACC/NOM\_pron> *jest*<AUX\_past> (*było*<AUX\_past>) *dano*<NTF>; *aby nie było*<AUX\_past> *rzeczono*<NTF>. Already in the 15<sup>th</sup> c. the tense marking auxiliaries *było* and *jest* were occasionally dropped in both syntactic environments, that is both in personal and in impersonal clauses. In the following centuries, auxiliaries drop became a rule, i.e. *gdzie zgotowano*<NTF> *miejsce*<ACC/NOM\_n>; *komu wiele*<Q> *odpuszczono*<NTF>; *papier, co na nim spisano*<NTF>. Besides, in the mid-16<sup>th</sup> c. the passive meaning of the participle shifted to active, so that *-no*, *-to* predicates now triggered not only neuter direct objects with syncretic nominative and accusative forms, but increasingly noun phrases headed by nouns that differentiate between nominative and accusative, i.e. *papier*<ACC/NOM\_m> *zapisano*<NTF>; *wodę*<ACC\_a-dec> *wylano*<NTF> (140)<sup>37</sup>.

An essentially distinct development of accusative assigning *-no*, *-to* clauses in Polish is delineated by Shevelov (1968), who, having investigated the earliest attestations of Polish *-no*, *-to* predicates, observes that already in late 1300s and early 1400s the *-no*, *-to* forms with

37 All of Kuraszkiewicz' exx above seem to be hypothetical.

a numerical phrase in the NP give rise to the *-no*, *-to* forms headed by nouns of different declensional classes in the NP. The end link in this process was the advent of *a*-declension nouns and feminine singular modifiers of *i*-stem nouns in the head NP of *-no*, *-to*. The tense marking auxiliaries apparently did not play any significant role in this process. None of the Shevelov's (1968) earliest *-no*, *-to* exx with overt copula *było*, has an underlying object of a declensional class that exhibits a clear-cut morphological accusative. There is one exx with present copula *jest* and a noun phrase headed by an *a*-declension noun, which however looks like a phraseological set expression, cf. *i dano<NTF> jest<AUX> ziemię<ACC\_a-decl> za ziemię prawym targiem* (206).

### 3.1.3. Origins of Eastern Slavonic *-no*, *-to*

Generally Eastern Slavonic accusative assigning *-no*, *-to* construction has been treated either as a genuinely Eastern Slavonic phenomenon, that is as the result of the internally motivated linguistic factors, cf. Šachmatov (1922), Bulachovskij (1950), Mel'nyčuk (1966), Filin (1971), Rusanivs'kyj (1971), Doros (1975), Arpolenko et al (1983) or as a syntactic borrowing from Middle Polish, cf. Borkovskij (1950/1951), Shevelov (1969), Moser (1998).

Shevelov (1969) observes that 16<sup>th</sup> and 17<sup>th</sup> c. Belorussian<sup>38</sup> and Ukrainian texts „swarm with *-no*, *-to* constructions“, while there are hardly any attestations of this construction in Eastern Slavonic texts before the late 1400s at all. Shevelov (1969) holds such chronology for significant since in Polish the accusative assigning *-no*, *-to* predicates came into being in late 1300s, about a century prior to Belorussian and Ukrainian. Since the Polish influence on Belorussian intensified after the union of Krevo in 1385, Shevelov (1969) is inclined to interpret the spread of *-no*, *-to* structures as one of the manifestations of the

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38 Matveenko (1961) mentions that *-no*, *-to* clauses are no longer attested in modern codified Belorussian. In Belorussian dialects however, copula-less *-no*, *-to* denote the perfect, while those with an overt copula have an aorist interpretation (91-92). Moreover, in contrast to modern Ukrainian, in Belorussian dialects it is obviously acceptable to use either *-no*, *-to* forms or *-ne*, *-te* desinence as predicates of a copula-less clause headed by a neuter singular noun (94). Also Bukatevič (1958) mentions that *-no*, *-to* clauses occur in Belorussian dialects, listing exx *Tut jich poseljano za pańščyny; stoh ukradzeno*. In the Belorussian literary language however such *-no*, *-to* forms must be substituted for personal sentences like *dvor prybran(y)*, *trava skošana(ja)*, *placce sšyta(e)*. The passive participles in standard Belorussian, in sharp contrast to modern Ukrainian and modern Russian, can be used either in short or in long form (303). Shevelov (1969) meditates on the reasons why *-no*, *-to* forms have been eliminated from the codified Belorussian. The factors that might have contributed to this elimination are “akan’je under conditions of which neuter and feminine of the nominal forms of the passive participle did not differ from each other so that the presence of two constructions (1) *Zjamlja na jamy vsja pabita* (Kolas, 38) and (2) *Zjamlju na jamy vsju pobita* was grasped as a sentence in agreement (1) vs. a sentence with disrupted agreement (2), the latter to be eliminated” (173). In Belorussian dialects the accusative assigning *-no*, *-to* can apparently co-occur with the oblique instrumental agent in the structure, cf. *travu stoptano korovamy*. Moreover, in sharp contrast to the accounts above that restrict the existence of *-no*, *-to* to Belorussian dialects, Doros (1975) is quoting several *-no*, *-to* exx apparently attested in Belorussian literary language, cf. *Verno, moego hazjaina zabito; Tut ich poselono za pańščyny; u Mograževiča vzjato konja* (97).

emerging Polish-Lithuanian political and cultural unity (173).

Shevelov (1969) introduces an ex *A toi erylk'*<sup><NOM/ACC\_m\_inan></sup> *pisano*<sup><NTF\_impf></sup> *ou Ordě* (1418) from the Ukrainian charters (1300s-1450s) collected by Rozov to argue that *-no*, *-to* construction with a direct object complement was possibly borrowed from Polish already in early 1400s. Shevelov (1969) is inclined to assign the record above, i.a. after Kuraszkiewicz (1934), to a Ukrainian scribe, claiming, that „[i]t is not impossible that the scribe who worked in the king's chancellery and was acquainted with clichés of Polish charters knew also the Polish formula *list pisano*, though by no means yet common in those years“(176-177). Otherwise Shevelov (1969) claims that *-no*, *-to* forms with accusative case marking are alien to Old Russian<sup>39</sup>, since the overwhelming majority of *-no*, *-to* predicates attested with direct object complements occur with a numerically quantified underlying object in the NP, that naturally triggers a default agreement in *-o*. Shevelov (1969) interprets such *-no*, *-to* as predicates of passive clauses with NPs headed by a quantifier or a numerical phrase as agreeing nominative structures, but crucially not as accusative assigning ones (175-176).

In sum, Shevelov (1969) claims that “... *-no/-to* with acc were borrowed into Ukrainian from Polish in the 15<sup>th</sup>-16<sup>th</sup> centuries; along with the Polish constructions of the type, by the 17<sup>th</sup> century they had acquired the function of denoting past action by unspecified person(s). However, with neuter nouns Ukrainian preserved its original use of *-no/-to* as participles of personal sentences. Hence while (as in Polish) *bulo*, *bude* were lost in impersonal *-no/-to* sentences, they were retained in personal ones with neuter nouns. [...] Such a situation was internally contradictory, but it was preserved for a long time (and perhaps still in some areas?), especially in those parts of the Ukraine in which Ukrainian-Polish bilinguality supported this asymmetrical use” (180-181).

Another key information in Shevelov (1969) is his observation that contrary to what is claimed in historical morphologies of Ukrainian, all of which go back to the erroneous conclusion in Dem'jančuk (1928, 97), contemporary neuter forms of passive participles in *-ne*, *-te* used in periphrastic passives in modern Ukrainian did not develop in the 14<sup>th</sup> c. The forms in *-o* in agreement with neuter nouns could function as agreeing neuter forms of participles long after the 15<sup>th</sup> c. (180-181, fn). In fact, Shevelov (1969) argues that *-no*, *-to* clauses with a noun phrase headed by a lexical neuter noun preserved their personal status well into the 20<sup>th</sup> c., and not only in the Western parts of the Ukraine (181).

Similar to Shevelov (1969), several Soviet linguists deny the Common Eastern Slavonic origin of the accusative assigning *-no*, *-to*. Bukatevič (1974) for instance interprets

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39 in recent terminology Old Russian has been increasingly replaced by Old Eastern Slavonic.

*-no*, *-to* forms with structural accusative in Middle Russian as isolated instances of Belorussian and Ukrainian interference (256f). Sprinčák (1960) however claims that the *-no*, *-to* predicates with direct object complement is a structure typical of Old Russian, observing, i.a. after Nikiforov (1952) that the construction has been attested in works that were not influenced by Ukrainian or Belorussian as well (102). Borkovskij (1963) argues that *-no*, *-to* forms headed by nouns in accusative or nominative are the instances of corrupt agreement especially typical of official documents with enumeration, i.e. phenomena that frequently occur in the lists of enumerated goods or artifacts (395). The construction was, Borkovskij (1963) claims, eliminated from the literary language in later centuries, to be finally confined to Southern and Eastern dialects of Russian (398-399). Borkovskij et al (1951) criticizes Bulachovskij (1950) for treating *-no*, *-to* predicates as a genuinely Old Russian phenomenon, stressing the complete absence of iron-clad exx of the *-no*, *-to* clauses, that is exx with nouns of *-a* declension, or with feminine singular modifiers of *i*-stem nouns in the direct object NP in any texts, except those with a clear Polish interference (71).

Rusaniv's'kyj (1971) claims that *-no*, *-to* predicates with accusative marking on the direct object complement were already attested in Ukrainian trial and court records of the 14<sup>th</sup> and 15<sup>th</sup> c., becoming frequent across all text types in the following 16<sup>th</sup> and 17<sup>th</sup> c. By the end of the 17<sup>th</sup> c. it is already differentiated between passive participles headed by neuter nouns in the subject position and predicates in *-no*, *-eno*, *-to* with a direct object complement in literary language. About this time emerge the accusative assigning *-no*, *-to* construction that was initially formed from perfective verbs (287). Rusaniv's'kyj (1971) does not mention Polish influence in connection to the establishment of *-no*, *-to* with structural accusative in Middle Ukrainian. In similar fashion, Arpolenko et al (1983) observes that *-no*, *-to* forms are frequent in Old Ukrainian texts, and from the 16<sup>th</sup> c. onwards become the characteristic feature of the Ukrainian syntax (279).

Likewise, Žovtobrjuch (1980, 287) observes that the earliest records of the non-agreeing passive participles in *-no*, *-to* are attested in Ukrainian official documents of the 14<sup>th</sup>-15<sup>th</sup> c. One of his exx has an *-a* stem noun in the NP, a morphological class that marks structural accusative unambiguously, and co-occurs with a past tense marking auxiliary in the structure, i.e. *i(ž) mi, de(i), bylo<COP\_past\_ru> včineno<NTF\_pf> škodu<ACC\_a-decl>* (1583, cited from *Aktova knyha Žytomyrs'koho mis'koho urjadu kincja XVI st.*, 45). Below are the oldest attested exx of *-no*, *-to* cited by Žovtobrjuch (1980): *A toi ęrlyk<ACC/NOM\_sg\_inan> pisano<NTF\_impf> ou Wrdě* (1393, cited from *Ukrajins'ki hramoty XIV v. i peršoji polovyny XV v.*, 49); *to na bucjevi. nasěčjeno<NTF\_pf> jeho<ACC/GEN\_mask\_an> dosyt'* (1418, *ibid.*, 35); *jęko i(ch)<ACC/GEN\_pl\_anim> k na(m)*



*prineseno*<NTF\_pf> *w(t) pana vilči i w(t) pana kupčiča* (1435, *Documentele moldovenești, 1374-1456*, 179); *Ale vidimo u tomъ listu tvoee milosti mnoho*<Q> *rečej pryloženo*<NTF\_pf> (1498, *Ukrajins'ko-moldavs'ki hramoty XV. st.*, 401).

Filin (1971) goes further than Rusanivs'kyj (1971) and Žovtobrjuch (1980), claiming that both agreeing participles in *-no*, *-to* and impersonal sentences in *-no*, *-to* are of Common Eastern Slavonic origin. However, since the unambiguously accusative case marking on the underlying object does not occur in early records, Filin (1971) suggests that early *-no*, *-to* forms are predicates of personal sentences (278) (cf. also Shevelov 1969). Moreover, similar to several Soviet linguists, Filin (2006) rejects the idea of Ukrainian *-no*, *-to* predicates as a syntactic borrowing from Polish, assuming that the accusative assigning *-no*, *-to* structures in Polish and Ukrainian were established independently: in Ukrainian they become widespread at the time of the formation of the Ukrainian language [no precise time span given], while in Polish they become productive in the 16<sup>th</sup> and 17<sup>th</sup> c. (498)<sup>40</sup>. Serzant (2012) observes that the non-agreeing *-no*, *-to* with direct object complement have been attested in early Moscow Russian as well, quoting a 1695 ex from the letter of Peter I, i.e. *Da ot" menja tebe poslano*<NTF\_pf> *mech"* (369), arguing, i.a. after Borkovskij et al (1963) that the accusative marking on the direct object complement in (Great) Russian *-no*, *-to* is first attested in the 16<sup>th</sup> and 17<sup>th</sup> c. texts, cf. *Skorbnovo slovom polzovano*<NTF\_pf>.

Among linguists who count accusative assigning *-no*, *-to* predicates to genuine Eastern Slavonic formations is also Šachmatov (1922), who, discussing the 11<sup>th</sup> c. Eastern Slavonic conjugation, is inclined to interpret *-no*, *-to* forms as a structure similar (if not identical) to modern Ukrainian accusative assigning *-no*, *-to* predicates. None of the 11<sup>th</sup> c. Šachmatov's exx however is iron-clad, that is none of them exhibits a morphologically unambiguous accusative case, cf. *medъ*<ACC/NOM\_fem\_non-a-decl> *dano*<NTF> *byst'*<COP\_aor> *Bohomъ*<INST> (Izbornyk 1076); *imъ že je poručeno*<NTF> *stroj tъ*<ACC/NOM\_mask\_inan> (Izbornyk 1073). The same observation is true for his chancellery language exx, i.e. *listy*<ACC/NOM\_pl\_inan> *prineseno*<NTF>; *A-ljubo inyi-hde by koli toho isnoho pana*<ACC/GEN\_mask\_anim> *našeho naim[i]l[o]stniišoho krolě polskoho i koruny eho naměstkomъ lichoe ouvolotstvo raženo*<NTF\_impf>, *a-ljubo molveno*<NTF\_impf>, – *i ovšem mili...* (108).

Mel'nyčuk (1966) has offered a sophisticated theory on the Eastern Slavonic origin of *-no*, *-to*. Namely, *-no*, *-to* with accusative is the result of a relatively late modification of a two-member subject-predicate sentence structure, that took place under the influence of older

<sup>40</sup> Likewise, Doros (1975) is inclined to interpret the emergence of Eastern Slavonic *-no*, *-to* predicates with direct object complements as internally motivated phenomenon, admitting however that the number of such records in early Eastern Slavonic texts is rather small (93).

impersonal passive constructions of the type *Tako bystb*<COP\_aor> *rečono*<NTF\_impf>. The first step towards the impersonal use of passive participles in *-no*, *-to* was, according to Mel'nyčuk (1966), the introduction of infinitives in the subject position of finite clauses, which triggered their re-analysis as direct objects<sup>41</sup>. The next step in the re-analysis of *-no*, *-to* forms from personal into impersonal clauses marked with direct object complement was the rise of genitive on the negated subject NP. As a result, a negated subject expression of the passive was reinterpreted into the direct object complement, cf. Old Russian *a sicei rate*<GEN> *ne*<NEG> *slyšano*<NTF\_impf>. Thus, constructions with neuter singular nouns in the subject NP of *-no*, *-to* predicates were reinterpreted into impersonal ones. Later, the similar re-interpretation took place in constructions with a numeral phrase in the subject NP, especially once numerals, having lost their old noun-like properties (i.e. the grammatical gender) began to trigger the neuter (default) agreement in *-o*, cf. *oubito*<NTF> *bys(tb)*<COP\_aor> *knjazii s(o)rok*<NUM>. The end link in this re-analysis was the establishment of impersonal constructions with passive participles in *-no*, *-to*, which, similar to active finite verbs, govern unambiguously marked direct object complements.

### 3.1.4. The erosion of the participial paradigm as a trigger of *-no*, *-to* re-analysis

The *-no*, *-to* re-analysis from passive into active mentioned in sections above implies assigning new morpho-syntactic properties to existing surface strings. Discussing morphological erosion as the trigger of morpho-syntactic changes for Polish and Ukrainian structures with direct object complement, Lavine (2013) mentions that syntactic change is usually accompanied by irregularities within inflectional paradigms, especially within morphological domain of agreement and case<sup>42</sup>. Such irregularities have been attested in the Common Slavonic participial system, more precisely within its participial and adjectival declensions. As observed in Siewierska (1988), the passive participles in Common Slavonic entered into two declensional systems, a nominal short one and an adjectival/participial long one, with *-no*, *-to* forms functioning as the nominal neuter passive participle desinence in agreement with its neuter subject. In Polish and Ukrainian, but crucially not in Belorussian or (Great) Russian, the nominal short forms were gradually eliminated, except for the *-no*, *-to* form, that lost its neuter reading and acquired an impersonal interpretation. Siewierska (1988) attributes the impersonal character of *-no*, *-to* predicates „in part to the fact that the neuter

41 cf. related ideas in Timberlake's (1974), namely, his observation that the nominative in Old Russian is attested as the object of an infinitive, which is a syntactic subject of a past passive participle. i.e. ...*a veleno im služitb gorodavaja osadnaja služba* (16-17).

42 Such small morphological changes, as Lightfoot (1979, 4) observes, „complicate a grammar, leading to “therapeutic” changes that remove this complication“ (cited in Lavine 2013).

gender is best predisposed to express abstract meanings“ (270). Related observation is made in Doros (1975), who mentions, that the abstract meaning is especially obvious if there is no agent expression in the structure of *-no*, *-to* (99). Likewise, Filin (1971) suggests that non-agreeing *-no*, *-to* forms historically conveyed a generalized passive action, because a neuter singular noun phrase was more suitable for this purpose than NPs of other declensional classes (278).

Similar to Siewirska, Lavine (2013) observes that the Common Slavonic is believed to have had two discrete declensions: a long pronominal and a short nominal one<sup>43</sup>. The long form pronominal declension was formed by attaching a demonstrative pronoun, that functioned like a definite article, to the nominal stem. In Polish and Ukrainian the pronominal declension underwent contraction and consequently no longer was in clear contrast with the nominal declension. As a result of such attrition, the contracted participles based on the initial pronominal declension were now used as predicates, further isolating the nominal forms whose only function from the very beginning was exclusively predicative (5). Lavine (2013) further observes that in Polish and Ukrainian the Common Slavonic long form pronominal neuter singular ending *-oje* contracted to *-e*, with various intermediate stages<sup>44</sup>. The null suffix of masculine nominal form was replaced with the pronominal ending *-y*, and both nominal and pronominal feminine forms became indistinguishable, after the old pronominal form *-aja* was shortened to *-a*. The crucial point, Lavine (2013) continues, is that the nominal neuter short form in *-o* now became the lone remaining member isolated in its paradigm. This „old neuter marker was clearly on a path to complete obsolescence had it not been assigned the new function of marking the transitive passive construction“ in Polish and Ukrainian (6). In similar vein, discussing the process of contraction of the long form participial and adjectival ending *-oje* to *-e*, Bevzenko (1960) observes that the short form ending *-o* remained *-o*, but was assigned a function of marking the newly emerged *-no*, *-to* with structural accusative, whereas the contracted ending *-e* now functioned as a lexical neuter singular ending of passive participles in periphrastic passive structures (194)<sup>45</sup>. Österreicher (1926, 57), Bevzenko (1960, 194) and Brajerski (1979, 85) believe that the process of contraction of neuter singular

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43 All adjectives and participles in Middle Ukrainian are believed to have had two forms – a long and a short one. Long form pronominal adjectives were declined and used to stress the attribute. There are no longer any short form adjectives in Ukrainian.

44 Bezpal'ko et al (1962) discusses i.a. the *-ee* desinence as a transitional stage in the process of contraction of the old long form neuter singular adjectival and participial desinence *-oje* to *-e* (287ff).

45 Bezpal'ko et al (1962) observes that modern Ukrainian no longer distinguishes between short and long form adjectives and participles. The agreement in *-o* in modern Ukrainian occurs exclusively in predicative function. The agreement in *-e* occurs as the predicate in periphrastic passive with a lexical neuter noun in the subject NP, as a modifier of a neuter singular NP, and in one-member clause without any head noun (287ff).

desinence *-oje* to *-e* was completed by early 1600s.

In his account of the rise and later divergence of the transitive, impersonal-like *-no*, *-to* construction in Polish and Ukrainian, Lavine (2013) argues after Shevelov (1968) that the Old Polish *-no*, *-to* construction with direct object complement was already attested in the 15<sup>th</sup> c., and was later borrowed into Ukrainian (2). Similar to Shevelov (1969) and Filin (2006), Lavine (2013) assumes a time span when the ending in *-o* in the environment of passive morphology was ambiguous between an agreeing canonical passive and the newly emerged impersonal *-no*, *-to* structure, since it marked both the raised neuter singular subject of agreeing *-no*, *-to* and the direct object complement of non-agreeing *-no*, *-to* (14). This affix respectively triggered two interpretations of *-no*, *-to* – as personal clauses and as impersonal ones. Even though the surface form of the participles in *-no*, *-to* did not change, there were two alternative interpretations of the word final morphology available for a period of time. To illustrate this ambiguous reading that arose in the process of morpho-syntactic re-arrangement of Polish *-no*, *-to* predicates, Lavine (2013) is citing the Österreicher's (1926, 55) ex *Nie obleczesz się w rucho, jeżto<PRON> z wełny a ze lnu tkano<NTF\_impf> jest<AUX>*. Lavine (2013) points out that the relative pronoun *jeżto* in this ex is morphologically syncretic between nominative and accusative. On the more conservative, non-innovative analysis, the relative pronoun *jeżto* is in nominative subject position, while the participle *tkano* is a regular periphrastic passive participle, in canonical agreement with its argument. If *jeżto* is interpreted as accusative, then *tkano* must be a newly emerged form, or an accusative assigning predicate in *-no*, *-to*. Lavine (2013) further suggests that the presence of tense marking auxiliary would welcome the original nominative analysis of the Polish structure, arguing that the re-analysis of the old morpheme *-no*, *-to* proceeded in stages: loss of the tense marking auxiliary, agentive reading of the *-no*, *-to* structures, and ban on agent expressions (4).

Lavine (2013) believes, i.a. after Österreicher (1926), that the transitive *-no*, *-to* construction marked with accusative becomes productive only after the disappearance of the tense marking auxiliaries from its structure (6). The final stage in the cluster of changes leading to establishment of accusative assigning *-no*, *-to* would be the emergence of the direct object complement with distinct nominative and accusative marking in the structure. As demonstrated in Lavine (2013), the earliest attested exx of the Ukrainian impersonal passive in *-no*, *-to* seem to copy the surface syntax of the Polish construction: the passive morphology is accompanied by accusative case marking, the tense marking auxiliaries and overt agent expressions are absent from the surface structure of *-no*, *-to*. Still, the Ukrainian construction was not faithful to the underlying syntactic nature of its Polish cognate, so that „[t]he

prohibition of the use of the auxiliary, as well as the ban on the passive by-phrase proved to be ultimately unmotivated by the way in which the impersonal passive came to be construed in Middle Ukrainian“ (2).

Discussing syntactic reanalysis and expansion of lexical input of the Polish *-no*, *-to* diachronically, Wiemer (to appear) observes that the development of the Polish *-no*, *-to* has been connected to the following independent processes that took place in the morpho-syntax of Polish historically: the syncretic nominative and accusative forms (9); the low frequency and loss of the copula in clauses with nominal predicates; the loss of nominal declension of adjectives and participles (10). Wiemer (to appear) further observes that there was a tendency toward a complementary distribution of agreeing participles that belonged to the pronominal declension and co-occurred with a copula and non-agreeing *-no*, *-to* as a remnant of the disappearing nominal declension used without a copula. The role of nominative-accusative syncretism should not be overestimated though: there are many exx in Slavonic languages of nominal predicates that do not agree with their subject NPs; non-agreeing participles with ambiguous syntactic status have also been attested in Old Russian birch bark writings (10).

Besides Wiemer (to appear) observes that from the end of the 14<sup>th</sup> c. till its establishment in the second half of the 17<sup>th</sup> c., the Polish *-no*, *-to* participle showed neither clear orientation toward passive reading, i.e. with an agreeing patient-NP, nor towards an impersonal reading with the patient of transitive verbs remaining in object position. Since no passive arose with transitive verbs, but the object has retained its original status which it had in active construction, no reanalysis from object to subject has taken place in Polish *-no*, *-to*. In modern Polish *-no*, *-to* form was established because the reanalysis failed, even though during 300 years it must have been on the verge of such reanalysis. Wiemer (to appear) argues i.a. after Shevelov (1968) that the rise of accusative assigning *-no*, *-to* was a Polish innovation, observing that Shevelov's (1968) and Podgórski's (1977) data reveal that the majority of *-no*, *-to* forms (158 out of 180, i.e. approx. 88%, in Shevelov's data) have been attested in administrative texts (11).

### 3.1.5. Language policy in earlier centuries and the Purism of today

The *-no*, *-to* clauses in Eastern Slavonic language variety have been characterized as structures typical of colloquial speech both synchronically and diachronically. Vaščenko (1958) for instance, discussing the stylistic correctness of *-no*, *-to* predicates in contemporary Ukrainian, describes them as a structure typical of oral tradition and popular folk songs, cf. *V nedilen'ku rano/Po vsim selu zahrano*<sub><NTF></sub>;/*Zahrano*<sub><NTF></sub>, *zabubneno*<sub><NTF></sub>;/*Bojary*

*pobudženo*<NTF> (161). Related account of diachronic *-no*, *-to* as a folksy element is given in Istrin (1922), who observes that passive voice in both Church Slavonic and (Old) Eastern Slavonic language variety<sup>46</sup> was expressed either with reflexives or with periphrastic passives, but crucially not with bare *-no*, *-to* predicates. Besides, Istrin (1922) has demonstrated, that scribes trained in Church Slavonic had the tendency to eliminate the passivoid phenomena, including *-no*, *-to* predicates, substituting them for active clauses (cf. Lomtev 1956, 203).

Likewise, discussing the stylistic effect of *-no*, *-to* historically, Janke (1960) observes that impersonal passive, especially the one with direct object complement in the structure, was avoided in the chronicles and elsewhere in Old Russian writings, since *-no*, *-to* belonged into the vernacular register<sup>47</sup>. The colloquial character of accusative assigning *-no*, *-to* predicates was sometimes softened by the introduction of the aorist copula *byst'* or *bě* into their structure (12). Janke (1960) is quoting the following ex from the Novgorod chronicle to demonstrate that the construction was classified as non-literary by the Church Slavonic scribes, and as such had to be eliminated, cf. *pěrenesena*<PPP\_fem> *bys(t') Borisa i Glěba s" L'ta Vyšegorodu*<sup>48</sup>. This sentence only makes sense if the scribe changed the *-no*, *-to* form *pěreneseno* into the participial form *pěrenesena*. Related ex is attested, according to Janke (1960), in *Zadonščina*, i.e. *uže bo verženo*<NTF> *Divo na zemli*. The *-no*, *-to* form is kept here, but the original accusative *Diva* (the pagan demon) has been substituted for *Divo*, so that the sentence no longer makes sense. Janke (1960) concludes that there might have been numerous *-no*, *-to* with structural accusative in the original Old Russian textual monuments that were later eliminated due to their vernacular flavor (13).

Janke (1960) observes that in the period of Moskow literary tradition, the impersonal *-no*, *-to* with a direct object complement, a structure typical of vernacular and chancellery language, was introduced into the literary language of Moscow. Even so, it never lost its colloquial character and could be employed only in low register literary works, like *Domostroj*, cf. *v ledu zasečeno*<NTF> *medok" i martovskoje pivco* (13-14). Generally Janke (1960) claims that accusative assigning *-no*, *-to* was typical of at least several Old Russian dialects and had been inherited from the Proto-Slavonic (17). Similar to Brajerski (1995), Janke (1960) relegates its establishment into the prehistoric times, the period when the passivoid phenomena did not exist yet. Moreover, Janke (1960) draws a parallel between the

46 The language spoken by the Eastern Slavonic peoples of Kievan Rus' in approx. 10<sup>th</sup> to 15<sup>th</sup> c.

47 Even though no unified definition of the term "register" exists, in sociolinguistics this term usually designates a language variety employed under particular social circumstances.

48 In quotation from Synod scroll, available on [izbornyk.org.ua](http://izbornyk.org.ua), there is aorist copula *bysta* instead of *bys(t')*, which does not make the sentence more grammatical though, cf. *Pěrenesena bysta Borisa i Glěba s" L'ta Vyšegorodu*.

Old Russian *-no*, *-to* with accusative and the related phenomena in Greek: the impersonal passive with direct object complement was present in the Greek vernacular since the ancient times; still, it was avoided in the standardized Greek and Latin; its records in original classical works had been eliminated by the later scribes – a situation that crucially echoes the Old Russian facts about *-no*, *-to* as delineated in Janke (1960) (60-61).

The status of *-no*, *-to* in Middle Polish apparently was exactly the opposite from the described above. Klemensiewicz (1974) offers a discussion between a writer and an editor about the stylistic effect of *-no*, *-to* in the 17<sup>th</sup> c. Polish. Apparently the editor Sandecki was inclined to substitute the active clauses of Murzynowski's for „more literary“ *-no*, *-to* predicates and participial passives, cf. *Tedy Herod obaczywszy, iż go tak mędracy nagrali* (Murzynowski) was corrected into *iz skłaman, omylon<PPP> od<od-PP> mędrców* (Sandecki); *gdyby sól smak utraciła; czem że będą solić* (Murzynowski) – *A jestli sól dla mnie zakażona<PPP> będzie<AUX>, czem solono<NTF> będzie<AUX>* (Sandecki); *Wszelkiego tedy drzewo, które nie czyni owocu dobrego, wycinają i w ogień miecą* (Murzynowski) – *wycięto<NTF> bywa<AUX> i do ognia miotano<NTF>* (Sandecki); *tedyć się wypełniło* (Murzynowski) – *napelniono<NTF> jest<AUX>* (Sandecki); *A oto otworzyły mu się niebiosy* (Murzynowski) – *otworzona<PPP> są niebiosy* (Sandecki) (420-23). Klemensiewicz (1974) observes however that generally the passive voice constructions were avoided in the written Polish diachronically (422-423).

Discussing predicates of the type *jedzono* and *pito*, Brajerski (1995, 484) observes that there are no such structures in colloquial Polish, nor in the language of popular discourses, neither *-no*, *-to* are attested in dialects, being the phenomenon of the written literary Polish alone. Brajerski (1995) sets out to determine why *-no*, *-to* are restricted to literary Polish. We reproduce his hypothesis below. That is, in the earliest Polish texts the *-no*, *-to* predicates were attested with copula *jest*, *jest było* and *było*, later only with the past tense marking auxiliary *było*, which linked them to passivoid phenomena, i.e. the sentence *Zaorano<NTF> było<AUX> pole* could have been set equal to the agreeing passive *Zaorane<PPP> było<AUX> pole*. Such oscillating readings of formally identical strings obscured the meaning of *-no*, *-to*: the context and word order was often crucial to identify such *-no*, *-to* as either active or passive predicates, cf. *Zaorano pole* (active) vs. *Pole już zaorano* (passive). The active meaning was clear only with the modal verbs in the structure, e.g. *Tę drogą miano<NTF> nie jeździć* and *Tę drogą miało nie być jeżdżono<NTF>* (484-485).

When in the second half of the 17<sup>th</sup> cf. the short form participial and adjectival endings were substituted for the long form endings, that is forms like *jest pisan*, *-a*, *-o* changed into

*jest pisany*, -á, -e, sentences like *Zaorano*<NTF> *pole*, formerly oscillating between active and passive reading, ended up as passive structures, due to the newly obtained -e desinence in place of ambiguous -o, i.e. *Pole jest/było zaorane*<PPP>. Then sentences of the type *Tę drogą wtedy nie jeżdżono*<NTF> were substituted for modern structures *Tę drogą wtedy nie było*<AUX> *jeżdżone*<PPP>, which, in order to depart from the original structure and its reflexive-impersonal cognate *Tę drogą się wtedy nie jeździło* came to designate not only human actions, but also the results of actions and states caused by animals and inanimate objects, cf. modern Polish exx *Patrz, jak tu wygryzione!* (Mice have eaten up the hole); *Patrzcie, jak tu wypalone!* (Lightning stroke sth). The implicit subject of -no, -to in Old Polish, e.g. in *Tu nie mogli w dom wnić, iż było*<AUX> *zamkiono*<NTF> (Rozmyśl. Przemyskie) seems to be restricted to human doers (485, fn.).

The active status of -no, -to structures with direct object complement, like *Schwytano*<NTF> *złoczyńcę*<ACC\_a-decl>, *Nie schwytano*<NTF> *złoczyńcę*<ACC\_ad-ecl>, *Używano*<NTF> *tych słów*<ACC/GEN\_pl>, *Ubierano*<NTF> *się* was more clear than of the clauses described above. The desinence -o in such structures was equally substituted for -e, but the whole structure could not be transformed into *\*Schwytano było złoczyńcę*; *\*Ubierano się było* since i.a. such transformations would also have triggered clauses like *\*Pola już było zaorane*, in which the old patient of periphrastic passives could be understood as a subject in agreement with the predicate, but never in agreement with the copula. Thus while accusative assigning -no, -to structures were eliminated in colloquial Polish, they were retained due to the literary tradition in a fossilized form in written Polish (485-486).

Brajerski (1995, 486) observes that -no, -to records are frequent in the 17<sup>th</sup> c. diary of the soldier and nobleman Pasek. The presence of -no, -to at the end of 17<sup>th</sup> c. in texts of colloquial nature is, according to Brajerski (1995), unexpected, and can be explained with the nobleman's striving to stick to the norms of the eloquent style, arguing that -no, -to predicates in the 17<sup>th</sup> c. colloquial texts bear a solemn character, since at that time they were no longer part and parcel of colloquial speech. Moreover, Brajerski (1995) observes that the usage of -no, -to forms in the 17<sup>th</sup> c. writings differs greatly from their usage in the records of 14<sup>th</sup>-16<sup>th</sup> c., since 17<sup>th</sup> c. authors did not entirely get the meaning of -no, -to predicates they were using. Brajerski (1995) is citing the following exx to support his claim: *rozebrawszy go do naga, przywiązał go na jegoż własnym koniu zdjawszy kulbakę gębą do ogona a do głowy tyłem, ręce opak związano*<NTF>, *nogi pod brzuch koniowi podwiązano*<NTF>, *potężnie bachmata, dosyć z przyrodzenia bystrego, zhukano, kańczugami osieczono, a jeszcze nadgłówek mu zerwawszy z głowy kilka razy nad nim strzelono* (Pasek). Brajerski (1995) observes that *związano* and



*podwiązano* in the ex above are used as adverbs. In similar vein, *pomazano* in the ex below has the meaning of an adverb, and is employed parallel to modifiers *biało* and *żółtawo*, cf. *Kura czwarta część biało z kwasem, w którym trochę krup pływało. ... Druga część kura żółtawo z barszczkiem, w którym się także krupy goniły. ... Ciasta sztuka niemala, wysoka na kształt czapki brąszwickiej, po wierzchu miodem pomazano*<NTF> (Niemojewski). The *-no*, *-to* structure in the last ex below is used, together with the structure in *-ło* to describe the subsequent events, as if the predicates *naderwano* and *urwało* were functionally equal, cf. *JmPanu Szumskiemu Krzyszfotowi z działą rękę urwało, JmPanu Uzdowskiemu z działą rękę naderwano*<NTF>, *JmPana Chrzóstowskiego piką w nogę uderzono* (Poczobut) (486-487)<sup>49</sup>.

In his comments upon syntactic issues in the wartime Ukraine under German occupation, Wexler (1974) mentions a writer complaining about the spreading of “(nonnative) passive impersonal constructions” like *mnóju*<INST> *búło*<sup>50</sup> *napýsano*<NTF> (174): “Most linguists oppose this feature, but some even think that it enriches the language, even though it is not Ukrainian; some ascribe to it the meaning of the pluperfect, but it must be noted that [the forms] are spreading more and more and must be fought” (Cet 1943; cited in Wexler 1974, 175).

Describing the changes happening to the *-no*, *-to* predicates in a broader context of disagreements over issues in Ukrainian syntax in early 1900s<sup>51</sup>, Wexler (1974) reports the following: “Sulyma 1929 notes that several linguists (Simovyč 1919, 1924; Kurylo 1920; Tymčenko 1926, and others) agree with him in rejecting as nonnative impersonal constructions with a passive participle in *-no*, *-to* with the subject in the instrumental case (e.g., *holovniši právyła právopysu vstanóvleno Akadémijeju Naúk* ‘the Academy of Sciences fixed the major rules of the orthography’), as well as similar constructions with the auxiliary *búde*, *býło* (*xlib býło kúpleno* ‘the bread was purchased’). Sulyma proposes the replacement of such constructions with an active verb and the subject in the nominative case or a passive construction with a preposition *vid* (*Akadémija Naúk ustanovýła holovniši právyła právopysu/holovniši právyła právopysu vstanóvleno vid Akadémiji Naúk*). Sulyma notes that there is some tolerance among other linguists for impersonal constructions with *búde*, *býło*

49 Brajerski (1995) claims that related cases of confusion in the meaning of *-no*, *-to* predicates are numerous in 17<sup>th</sup> c. texts. Some of them might have been triggered by the semantics of adverbs like *nadqsano* (cf. *Odparł krótko, nadqsano*), *pijano* (*na pól pijano ciągnął opowiadanie*), *odarto* (*wyglądał odarto*), *opięto* (*kawalerowi ... opięto przybranemu*), that have been eliminated from the Polish language in the 19<sup>th</sup> c. Such adverbial forms are derived from the participles *nadqsany*, *pijany*, *odarty*, *opięty* respectively (487).

50 Note that the copula *búło* stressed on the first syllable betrays the writers origin from the (South)Western Ukraine, because the standard Eastern Ukrainian pronunciation would be *buló*.

51 Wexler (1974) observes that early 20<sup>th</sup> c. regulators looked at the language of popular writers to shape the literary norm. i.e. attention was paid i.a. to *-no*, *-to* predicates, since *-no*, *-to* had been attested in the works of 19<sup>th</sup> and 20<sup>th</sup> c. writers like Ševčenko, Franko, Kocjubyns'kyj, Ukrajinka, Tyčyna (162).

(Synjavs'kyj 1922; Ohijenko 1925; Hruns'kyj and Sabaldyr 1926; Ivanycja 1927)” (136).

As obvious from the quotes above, *-no*, *-to* predicates apparently developed several innovative properties during the early 1900s, namely overt tense marking auxiliaries and instrumental agent expressions (cf. also Shevelov 1969/1993). Likewise, Billings and Maling (1995) observe that “during the past century Ukr[ainian] *-no/-to* has developed future-tense forms and the distinction between past and present (depending on the presence/absence of the past-tense copula *bulo*)” (17), interpreting the advent of instrumental agent expressions in Ukrainian *-no*, *-to* clauses in past century as “apparently another step in the passive-hood of this construction” (21). Several accounts mention the diachronic change that obviously triggered these innovative (passive) qualities of *-no*, *-to* predicates in early 20<sup>th</sup> c. For instance Synjavs'kyj (1922) reports the emergence of instrumental agent expression in *-no*, *-to* predicates, an agent expression which is described by him as alien of the Ukrainian vernacular (111). Also Dloževs'kyj (1928) ponders over the advent of overt auxiliaries and instrumental agent expressions in Ukrainian accusative assigning *-no*, *-to* predicates.

The emerging syntactic innovations described above have been criticized as Russian influence by prescriptive grammarians who advocated purism in language. Shevelov (1963) describes the early 20<sup>th</sup> c. striving to preserve the original meaning of *-no*, *-to* as structures related exclusively to the process of human activity in the past as a tendency “contrary to the trend of the living language” (142). Shevelov (1989) summarizes the debate over the legitimacy of overt tense marking auxiliaries and agent expressions in *-no*, *-to* clauses and its main contributors during the early 1900s<sup>52</sup>. The debate was especially heated around the legitimacy of (instrumental) agent expressions.

Discussing the ongoing changes in the syntax of Ukrainian *-no*, *-to* predicates from the turn of the 20<sup>th</sup> c., Kurylo (1922) strongly prohibits the instrumental agent in *-no*, *-to* clauses, solely accepting instrumental adjuncts with collective entities in the nominal phrase that, according to her, can only designate a tool. Kurylo (1922) favors the use of vid-PP in place of instrumental agent (35f). For Smerečyns'kyj (1932) the use of instrumental agent expression in *-no*, *-to* predicates is equivalent to the non-agentive use of the *čerez*-PP. Smerečyns'kyj argues that the human actor in the instrumental noun phrase in Ukrainian *-no*, *-to* predicates could only be the instrument or the mediator of the action in the least (18). Otherwise, the

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52 Describing prescriptive grammarians of the period, Shevelov (1989) remarks, that „[t]he main representatives of the ethnographic, extremely puritanistic school were... Je. Tymčenko, O. Kurylo in her early writings, M. Hladkyj..., and outside the Soviet Ukraine, V. Simovyč in his early writings and I. Ohijenko [= Ilarion]. The syntactic, moderately puristic trend was represented by O. Synjavs'kyj, M. Sulyma, ... O. Kurylo in her later writings... The extreme puristic trend was stronger in Kiev [Kyjiv], the moderate one in Kharkov [Xarkiv]” (138) (cited in Billings and Maling 1995, 67).

presence of the instrumental agent expression in Ukrainian *-no*, *-to* structures indicates the Church Slavonic interference (16). Although Smerečyns'kyj (1932) allows *vid/ot*-PP with canonical and reflexive passives, neither *vid/ot*-PP nor instrumental of agent (no agentive phrase at all) is permitted in *-no*, *-to* predicates (19). Also Ivanica (1925) prohibits all agent expressions in synchronic Ukrainian *-no*, *-to* predicates. Smerečyns'kyj (1932) further observes that it is Galizian intellectuals alone, who, under Polish influence, employ the *čerez*-PP to express the doer of the action. He quotes Simovyč to demonstrate that the preposition „čerez“ in vernacular can only designate „with the help of somebody“ or „via somebody“, but can never introduce an agent into the structure of *-no*, *-to*. An agent expression typical for Ukrainian vernacular is, according to Smerečyns'kyj (1932), actually *v/(u)*-PP (22). This take on *v*-PP has also been shared by linguists Jižakevyč (1975) and Wieczorek (1994).

In similar fashion, Horec'kyj et al (1926), Hruns'kyj et al (1926), Dloževs'kyj (1926) and Simovyč (1943) prohibit all types of agent expressions, but do permit overt future and past tense marking auxiliaries in the structure of *-no*, *-to*. Dloževs'kyj (1926) additionally remarks that the tense marking auxiliaries *bulo* and *bude* are alien to Ukrainian colloquial speech altogether, and can be only encountered in literary language (226). Sulyma (1928) is inclined to see the Russian influence in the use of future and past copula in Ukrainian *-no*, *-to* predicates, recommending to employ the canonical passive instead of non-agreeing *-no*, *-to* with tense marking auxiliaries (81). Sulyma (1929, 60) characterizes tense marking auxiliaries in the constructions of the type *xlib býlo*<COP\_past\_ru><sup>53</sup> *kúpleno*<NTF> and *xátu býlo*<COP\_past\_ru> *zbudóvano*<NTF> as Russianisms (cf. Wexler 1974, 155, fn 168). In similar vein, Smerečyns'kyj (1932) forbids tense marking auxiliaries on *-no*, *-to* predicates (8), interpreting the past copula with *-no*, *-to* predicates as an archaism, and its very presence as the result of the contamination with Russian canonical passive construction. He argues that copula-less *-no*, *-to* predicates can convey both aorist and pluperfect meaning (12), commenting that tense marking auxiliaries and structural accusative simply cannot co-occur in synchronic Ukrainian *-no*, *-to* predicates (13).

The anti-puristic prescriptive trend was represented by a smaller group of linguists. Chvylja (1933) criticizes Smerečyns'kyj's prescriptive attitude against overt tense marking auxiliaries in synchronic Ukrainian *-no*, *-to* predicates (25f). Nimčynov (1933) actually prescribes the use of the past copula in Ukrainian *-no*, *-to* clauses (31f). Matvijenko (1936) criticizes the prescriptivist attitudes of Kurylo, Sulyma and Dloževs'kyj, who, according to

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53 Note that Sulyma, an Eastern Ukrainian linguist from Charkiv, is not talking about the standard Ukrainian past copula *buló*, like most of his contemporaries, but mentions the Russian or at least the Russian-looking copula *býlo* in the structure of *-no*, *-to* predicates. The copula *býlo* is also typical of North Ukrainian dialects.

Matvijenko, falsify linguistic reality (cf. Billings and Maling 1995, 49). Matvijenko (1936) further observes that the prescriptive ban on tense marking auxiliaries is not eligible, since *-no*, *-to* are in fact attested with future copula, citing the ex *bude*<AUX\_fut> *pererobleno*<NTF> *burjaku*<GEN\_part> (67). In his school textbook Vaščenko (1940) comments, that *-no*, *-to* predicates can trigger overt tense marking auxiliaries and the acting person can optionally be expressed with instrumental case. The optionality of agent expressions in *-no*, *-to* predicates speaks for their adjunct status in the structure (48f).

The treatment of *-no*, *-to* predicates in recent decades remotely reminds the prescriptive battle of the early 1900s, with tense marking auxiliaries and overt agent expressions as a fresh apple of discord. Still, it is much less heated. Modern (usually prescriptive, seldom descriptive) grammars mysteriously ignore the topic altogether, the treatment of *-no*, *-to* phenomena being more than scarce (usually less than half a page). The modern Ukrainian text-books readily skip comments on the use of tense marking auxiliaries and agent expressions, so that their definitions of *-no*, *-to* convey an (erroneous) idea that *-no*, *-to* clauses never co-occur with tense marking auxiliaries and never trigger agent expressions<sup>54</sup>. For instance, the textbook of Voloch et al (1989) does not mention the *-no*, *-to* construction, neither as a separate phenomenon, nor in relation to impersonal sentences. Neither Vychovanec' (1993, 99), nor Ponomariv (2001, 191), nor Hryščenko (2002, 396) mention either tense marking auxiliaries or agent expressions in their treatment of accusative assigning *-no*, *-to* predicates. In their marginal treatment of *-no*, *-to*, the textbooks for higher educational establishments like that of Zubkov (2003, 246) usually mention that in contrast to agreeing passives, *-no*, *-to* forms are used to emphasize the action in its end result, not in its process. While permitting the tense marking auxiliaries *bulo* and *bude*, Zubkov (2003, 246)

54 An ex of *-no*, *-to* treatment in *Sučasna ukrajins'ka literaturna mova* (Pljušč, 2000), a textbook used by the author during her first two years at Kiev Linguistics University (former injaz) is reproduced below: “V sučasnij ukrajins'kij movi vžyvajut'sja spivvidnosni z pasyvnymy dijepryslivnykamy nezminni formy na *-no/-to*, napryklad: podano, vykonano, rozbyto, perekryto. Ci formy tvorjat'sja vid osnovy infinityva perechidnych dijesliv. Vid form pasyvnnych dijepryketnykiv vony vidriznjajut'sja tym, ščo ne zminjajut'sja, i v rečenni vykonujut' til'ky predykatyvnju funkciju: vystupajut' holovnym členom bezosobovoho rečennja, napryklad: kožnij ljudyni vidkryto v nas dorohu – tvory, derzaj (Bojč.). Nezminni predykatyvni formy na *-no/-to* majut' značennja vydu (pysano-napysano, robleno-zrobleno, byto-zbyto) i majut' zdatnist' keruvaty vidminkovoju formoju zaležnoho imennyka: znachidnoho abo rodovoho prjamoho ob'jekta, orudnoho znarjaddja abo zasobu diji ta daval'noho sub'jekta, napr. zaprošeno joho, pidpysano protokol, šyto poly; ne vykopano jamy, ne vsypano cukru; napysano perom, naljakano slovom, schopleno rukoju, tobi nakazano (ščos' kymos'); synovi veleno (ščos' kymos'). Predykatyvni formy na *-no/-to* možut' označatysja slovamy z obstavynnym značennjam (imennykamy, pryslivnykamy), napr. posijano v poli, zrobleno vdalo, pomičeno nedavno”. The treatment above does not provide any information as to the agent expressions or tense-marking auxiliaries in the structure of the contemporary *-no*, *-to* predicates. Put into a nutshell, the construction is described as a fossilized and non-altering structure formed from transitive verb stems and employed as a predicate. It admits both perfective and imperfective verbs and can govern structural accusative or genitive, instrumental of tool and instrumental of means.

and Juščuk (2004, 401) do not say anything in particular as to the status of agent expressions. In similar vein, Kozačuk (2007) briefly lists *-no*, *-to* clauses under other impersonal sentences of contemporary Ukrainian, escaping any comments on its syntactic properties (246). Bezpojasko et al (1993) allows the tense marking auxiliaries and the instrumental of means, but not the instrumental agent in the structure of modern Ukrainian *-no*, *-to* predicates (162f).

In his text book Olijnyk et al (2007) points out that the agent expressions are not eligible in *-no*, *-to* predicates, since the subject can never be expressed in this construction. The *-no*, *-to* forms can be used with past and future tense marking auxiliaries (217). Cilyna (2008) comments that *-no*, *-to* forms express an action irrelative of the performer (124), only instrumental of means is eligible (136). The past copula *bulo* is used to mark the aorist, while copula-less *-no*, *-to* render perfective meaning (141f). Pljušč (2009) only permits instrumental of means, not instrumental of agent, there is no mention of tense marking auxiliaries at all (293). Zagnitko (2009, 2.1.4) [no page numbers in this text-book] escapes the issue altogether, solely remarking that *-no*, *-to* forms are used to emphasize the action in its end result, not in its process. Azarova et al (2010) bans the agent expressions in the *-no*, *-to* construction. The main function of accusative assigning *-no*, *-to* predicates is to emphasize the result of an action, not the doer of the action, as it is the case, according to Azarova, in modern Russian cognate constructions. The performer of the action in the instrumental case is thus not allowed (40-41). According to Karaman et al (2011), accusative assigning *-no*, *-to* predicates in contemporary Ukrainian have the passive meaning, so that both the instrumental of means and the instrumental designating the performer of the action as a source, i.e. the (semi-)agentive interpretation, are possible (441). Lavrinec' (2013) bans the use of the instrumental agent in predicative forms in *-no*, *-to*, permitting only the instrumental of means (315). In her handout circulating in internet Horodens'ka speaks against the instrumental agent expressions in Ukrainian *-no*, *-to* clauses.

### **3.2. Grammatical categories relevant for *-no*, *-to* analysis**

#### **3.2.1. Periphrastic passives alongside *-no*, *-to***

A comparative empirical examination of passivoid phenomena in modern Ukrainian has been carried out by Nedashkivska Adams (1998), who characterizes the periphrastic passive and *-no*, *-to* predicates in contemporary Ukrainian as below: “Traditionally, one of the two main voice constructions in Ukrainian is referred as the ‘canonical’, or agreeing passive [...]. This construction displays the patient in subject position in the nominative case, with the

past passive participle agreeing with it. It is generally believed that the agent in this construction may or may not be overtly expressed; if it is expressed, it is marked with instrumental case. [...] The other construction is the non-agreeing ‘impersonal’ passive, in which the patient preserves its accusative case marking, and the verbal form is a past passive participle marked with the suffixal ending *-no/-to*, which does not agree with any overt constituent in the sentence [...]” (189-190). Nedashkivska Adams (1998) further remarks that the passive “*-no/-to* constructions may be questioned with variations of ‘what happened?’ By contrast, agreeing passives describe states or properties of the patient/subject” (198). Besides, the two constructions differ in their temporal interpretation, namely *-no*, *-to* are not as tightly bound to the accompanying formal tense expressions, as the agreeing passives (204). While the *-no*, *-to* predicates predominantly occur in the foreground part of the discourse, the canonical passive occur mainly in the background (205). Tied to distinct discourse environments, the two structures do not collocate with each other in the context (206).

The paragraph above suggests that agreeing or periphrastic passives and *-no*, *-to* predicates are not in free alternations in contemporary Ukrainian. Nedashkivska Adams (1998) has shown that *-no*, *-to* predicates in modern Ukrainian are currently acquiring the status of actional, or eventive passives, while the canonical passives, earlier both actional and statal, are increasingly becoming confined to the statal, or resultative, interpretation. She argues that such re-assignment of voice roles is accompanied by structural modifications within the phrase structure of periphrastic passives, since in modern Ukrainian they increasingly occur without any overt agent expressions (192). Nedashkivska Adams then discusses Billings (1995), who likewise observes that *-no*, *-to* constructions are not optional alongside agreeing passives in modern Ukrainian. The choice between agreeing and non-agreeing impersonal passives apparently depends on pragmatic focus and discourse factors (191-192). In similar vein, Knjazev (1988) in his discussion of actional passives in Russian (355), and Wiczorek (1994) in her analysis of *-no*, *-to* constructions in Ukrainian (24), mention that actional passives are typical for situations of „hot news“<sup>55</sup>.

In sharp contrast to Nedashkivska (1998), Franks (1995) suggests that periphrastic passive in fact is in free alternation with accusative assigning *-no*, *-to* predicates, cf. “All available evidence leads to the conclusion that in Ukrainian whether the active object is expressed in the passive voice as a nominative subject, inducing subject-verb agreement, or as an accusative object, with default (or no) subject-verb agreement, is purely stylistic or

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55 Billings and Maling (1995) however report that their informants did not interpret the events expressed with *-no*, *-to* predicates as “new” (80, fn).

regional” (353). Also Wieczorek (1994), on the basis of a moderately large corpus of her 20<sup>th</sup> c. texts, corroborates that contemporary Ukrainian *-no*, *-to* predicates may equally trigger both resultative (statal) and dynamic (actional) interpretation (67).

In contrast to the periphrastic passive formed by means of an auxiliary and a passive past participle, the *-no*, *-to* predicates use a single form of the lexical verb that in modern Polish cannot co-occur with agent expressions and tense marking auxiliaries. Lavine (2013) relates such non-compatibility of Polish *-no*, *-to* with tense marking auxiliaries to the voice-altering nature of the *-no*, *-to* affix, arguing that in modern Polish the *-no*, *-to* affix itself is the bearer of Tense (10). While agents and auxiliaries are ungrammatical in accusative assigning *-no*, *-to* predicates, canonical passive in modern Polish can be naturally marked with tense marking auxiliaries and both instrumental and prepositional agent expressions. Siewierska (1988) observes after Saloni (1976) that the instrumental marking in modern Polish tends to be used exclusively with inanimate entities in the NP (251).

In contrast to periphrastic passives in modern Ukrainian, that can only employ the auxiliary *buty*, there are two tense marking auxiliaries that can be used in periphrastic passives in modern Polish – *zostać* and *być*. Siewierska (1988) remarks that the *zostać*-passive in Polish is used only with perfective verb stems, whereas the *być*-passive occurs with both perfective and imperfective verb stems. While *zostać*-passives are always actional, *być*-passives can apparently be either actional or stative (250). In the same vein, Przygoda (1976) comments that stative passives trigger the auxiliary *być*, while the actional passives the auxiliary *zostać* (119). Thus, there seems to be a correlation between a tensed verb chosen and the aspect of the overall phrase – while *być*-passives simply support tense regardless of aspect, *zostać*-passives in the canonical passive construction are employed to mark the perfective meaning of the whole clause. Brajerski (1972) observes that *zostać*-passive in modern Polish are seldom employed. Besides, *zostać*-passives never occur in the spoken Polish or in its dialects. When used in belletristic, the *zostać*-passive is usually found in texts made archaic stylistically (38).

Discussing the syntactic properties of the unexpressed external argument of Polish *-no*, *-to* predicates alongside the implicit subject of the passives, Rudnicka-Mosiadz (2000) observes that the unexpressed argument of periphrastic passives without a *przez*-PP is not lexically restricted to the human interpretation. Thus, periphrastic passives in modern Polish can have both human and natural force reading, i.e. *Kościół został<AUX> zniszczony<PPP\_pf> (przez ogień/powódź/wroga)* (7). Unlike the core argument in periphrastic passives, the external argument of *-no*, *-to* must be sentient, that is Polish *-no*, *-to* preclude the possibility of

animal or natural force interpretation. Rudnicka-Mosiadz (2000) further remarks that similar to periphrastic passives, *-no*, *-to* predicates, as subjectless clauses “can easily be ascribed the function of de-emphasising the external argument, since it is canonically linked to a subject position”, even though such de-emphasising is reached by various means in each of the two structures (7). Consequently, the communicative functions of both structures are akin: they serve to de-emphasise the instigator of the action (9).

In her Construction Grammar (CG) analysis of *-no*, *-to* predicates in their relation to periphrastic passives, Rudnicka-Mosiadz (2000) argues that CG framework can offer a more complete comparative account of both structures than GB framework, since it looks both formally and functionally into all aspects of their linguistic structure (9). What periphrastic passives and *-no*, *-to* predicates have in common, is that they can be formed from both transitive and intransitive verbs, although the passives formed from intransitives are, according Rudnicka-Mosiadz (2000), rare. She further observes that the two constructions under scrutiny are productive with agentive transitives, and subject- and object-experiencer verbs; besides both are productive with unergative verbs, whereas only *-no*, *-to* admit unaccusatives (8). Kibort (2001) observes that synchronic Polish *-no*, *-to* predicates generally admit a broader class of verbs than periphrastic passives; in sharp contrast to periphrastic passives, Polish *-no*, *-to* admit canonical unaccusative verbs such as „remain“, „die“, or even „be“ (163-164).

Rudnicka-Mosiadz (2000) mentions that within the framework of truth-conditional semantics *-no*, *-to* forms correspond to passives without a *przez*-PP. She argues in sense of Lambrecht (1994) that *-no*, *-to* structure and periphrastic passive “...express the same state of affairs in a given world” (14), cf. *Pies został<AUX> nakarmiony<PPP\_pf> (przez Janka)* vs. *Nakarmiono<NTF\_pf> psa<ACC/GEN\_sg\_anim>*. Rudnicka-Mosiadz (2000) then suggests in the light of Goldberg's (1995) *Principle of No Synonymy* that two semantically synonymous and formally distinct constructions must be pragmatically distinct. Therefore, she concludes, the difference between two constructions must reside in their information structure. Drawing on Lambrecht (1994, 17) Rudnicka-Mosiadz (2000) introduces the idea of ALLOSENTENCES, or pairs of semantically synonymous, but pragmatically divergent units. Then Rudnicka-Mosiadz (2000) suggests that Polish periphrastic passive with an agent expression in the shape of *przez*-PP forms a pair of ALLOSENTENCES with a corresponding active clause, while the periphrastic passive without any agent expression forms a pair of ALLOSENTENCES with the accusative assigning *-no*, *-to* predicates. As to the information structure, the *-no*, *-to* predicates emphasize the event as such, while periphrastic passives emphasize the entity affected by the event (12).



In sum, *-no*, *-to* forms is a CG construction dominated by a periphrastic passive construction, that consists of the *-no*, *-to* verb form and an “emphasise the Event” function (13).

The periphrastic passives alongside *-no*, *-to* historically have been investigated by Kowalska (1991), who compares the 15<sup>th</sup> c. structures of the type *jest zabity*<PPP>, *jest zabito*<NTF> and *są zabity*<REFL> attested in the Bible of Queen Sophia (BS) to the correspondent phenomena in the 16<sup>th</sup> c. Bible translation by Jakub Wujek (BW). Kowalska (1991, 101) observes that in both translations participial passives, that is bare participles used as predicates, as e.g. *Potem po ośmiu dniach lepak gołębek wysłan*<PPP> *z korabia* (BS), or *umarł i położon*<PPP> *do ludu swego* (BW), are rare. Kowalska (1991) further observes that both translations frequently employ canonical passives with participles formed from perfective verb stems. In the Bible of Queen Sofia the overwhelming majority of the participles employed in periphrastic passives are short form participles (to be precise there are 152 short form and only 8 long form participles), while in BW short and long form participles in periphrastic passives evenly co-occur (there are 60 short form and 53 long form participles), e.g. *a nie jest wodą oczyszczenia pokropion*<PPP\_short> (BS) vs. *a nie pokropion*<PPP\_short> *jest wodą oczyszczenia* (BW); *ku przeżegnaniu jestem przywiedzion*<PPP\_short> (BS) vs. *ku błogosławieniu przywiedziony*<PPP\_long> *jestem* (BW); *a obleczon*<PPP\_short> *jest w święte rucho* (BS) vs. *i obczony*<PPP\_long> *jest w szaty święte* (BW). Generally Kowalska (1991) has observed that in the 16<sup>th</sup> c. translation passivoid phenomena are less numerous than in the 15<sup>th</sup> c. translation. Wujek, who did the 16<sup>th</sup> translation, had the tendency to substitute passive structures for active predicates or reflexives, cf. *i wołu ukamionują* (16<sup>th</sup> c.) in place of *woł kamieniem obrzucon*<PPP\_short> *będzie*<AUX\_fut> (15<sup>th</sup> c.); *podłęże szkodzie* (16<sup>th</sup> c.) in place of *poddan*<PPP\_short> *będzie*<AUX\_fut> *szkodzie* (15<sup>th</sup> c.); *pomiesza się losów podzielenie* (15<sup>th</sup> c.) instead of *złożon*<PPP\_short> *będzie*<AUX\_fut> *losowy rozdział* (15<sup>th</sup> c.) (101-102).

Similar tendency can be observed in case of 15<sup>th</sup> c. *-no*, *-to* predicates with overt tense marking auxiliaries in the structure, that Kowalska (1991) interprets as instances of periphrastic passive, and which are often coded as personal sentences in the 16<sup>th</sup> c. translation, cf. *Przecz zgładzono*<AGR/NTF> *jest*<AUX\_pres> *imię jego z czeladzi jego* (15<sup>th</sup> c.) vs. *przecz ginie imię jego z domu jego* (16<sup>th</sup> c.); *gdzież za Jordanem Jerycho ustawiono*<AGR/NTF> *jest*<AUX\_pres> (15<sup>th</sup> c.) vs. *gdzie za Jordanem Jerycho leży* (16<sup>th</sup> c.); *A jestli odwrocono*<AGR/NTF> *będzie*<AUX\_fut> *serce twe* (15<sup>th</sup> c.) vs. *Lecz jeśli się odwróci serce twoje* (16<sup>th</sup> c.); *podle przeklęcia, jeż to w księgach tego to zakona i zaślubienia jest*<AUX\_pres> *popisano*<AGR/NTF> (15<sup>th</sup> c.) vs. *według przekleństw, które się w księgach zakonu i tego przymierza zamykają* (16<sup>th</sup> c.) (103-104). Kowalska (1991) observes that generally *-no*, *-to* forms without overt tense marking

auxiliaries are rare in the 15<sup>th</sup> c. Bible translation; they occur either with noun phrases syncretic between nominative and accusative, or as the lone member of the noun phrase, i.e. with no head noun, cf. *I rzeczono<NTF> k niemu; I weźrzał Abram ku Bogu, a sprawiedliwość jemu obrocono<NTF>; Tedy powiedziano<NTF> Labanowi trzeciego dnia, iżę Jakob uciekł; i zdziano<NTF> temu mieścu płacz dęba; czso ofiarowano<NTF> w darzech; aczby naleziono<NTF> to, czso ukradł jest* (102).

Kowalska (1991) argues that *-no*, *-to* forms in this 16<sup>th</sup> c. translation already function as finite predicates, since several of them are attested with direct object complements (irrefutably) marked with accusative, cf. *i wsadzono<NTF> go<ACC/GEN\_m\_anim> do ciemnice; i wzięto<NTF> niewiastę<ACC\_a-decl> do domu Faraonowego; za ziemię obrzymów maino<NTF> jq<ACC\_a-decl>; Dwa podstawki<NOM/ACC\_pl\_inan> pod jedną deszczkę kładziono<NTF>; A jeśli by nadgrode<ACC\_a-decl> włożono<NTF> nań, da za duszę swoją, cokolwiek zażądają* (103). Parallel to such impersonal finite *-no*, *-to* clauses with structural accusative there are also *-no*, *-to* passive participles in their original meaning, employed in the structure of personal passives. In the 15<sup>th</sup> c. Bible translation, out of 115 canonical passive records with neuter nouns in the NP, there are 111 records of short forms participles in *-no*, *-to*, all of which are formed from perfectives, and 4 records of participles in *-ne*, *-te*. The number of canonical passives with neuter nouns in the NP is smaller in the 16<sup>th</sup> c. translation, i.e. there are 60 such constructions, 32 of them are attested with *-no*, *-to* predicates and 28 with predicates in *-ne*, *-te*. As obvious from the data above, the number of *-ne*, *-te* predicates in agreement with their neuter subjects in periphrastic passives has increased substantially, their growth rate is similar to the growth observed in *-ny*, *-ty* predicates in agreement with masculine subjects in periphrastic passives. Kowalska (1991) quotes several exx to demonstrate how the short form declension *-no*, *-to* was (partially) substituted for *-ne*, *-te* in the 16<sup>th</sup> c. Bible translation, e.g. *od tych, którzy więcej mają, więcej wzięto<NTF/AGR> będzie<AUX\_fut>* (15<sup>th</sup> c.) vs. *od tych, którzy więcej mają, więcej odjęto<NTF/AGR> będzie* (16<sup>th</sup> c.); *Ale aby zniedzono<NTF/AGR> było, czsoż jest było po gradzie ostało* (15<sup>th</sup> c.) vs. *ale żeby zjedzono<NTF/AGR> było, co by zostało po gradzie* (16<sup>th</sup> c.); *ciało nie będzie obrzezano<NTF/AGR>* (15<sup>th</sup> c.) vs. *ciało nie będzie obrzezane<AGR>* (16<sup>th</sup> c.); *i odjęto<NTF/AGR> będzie królestwo jego* (15<sup>th</sup> c.) vs. *i odjęte<AGR> będzie królestwo jego* (16<sup>th</sup> c.) (103).

### 3.2.2. Tense marking auxiliaries in the structure of *-no*, *-to*

Shevelov (1963) observes that originally *-no*, *-to* clauses designated an action that took

place in the past. The original function of *-no*, *-to* however became obscure when the nominal short form participles were replaced by long ones, and *-no*, *-to* remained a sole member of the participial nominal declension. The major function of (accusative assigning) *-no*, *-to* clauses in contemporary Ukrainian is „to convey a past action in its consequences which still exist ... (perfective, and in the verbs of imperfective aspect – iterative-perfective)“, cf. *Šuri Možal's'kij obicjano<NTF> robotu<ACC\_a-decl> des' u kramnicy* (139). Shevelov (1963) further observes that recently *-no*, *-to* formed from imperfective verb stems are rarely found, since they do not sufficiently convey the meaning of an action in its consequences which are still available – their core meaning in modern Ukrainian. The copula *bulo* is employed to support an absolutely past tense of *-no*, *-to* clauses. The presence of the copula *bude* is interpreted by Shevelov (1963) as an especially strong indication of the loss of real temporal meaning in the impersonal *-no*, *-to*, cf. *Čudovyj misjac'<ACC/NOM\_m\_inan>, prožytyj tut, bude<AUX\_fut> i zakinčeno<NTF> čudovo* (140). Besides, Shevelov (1963) remarks that „there are very many examples of the use of the sentences of the *-no*, *-to* type with the verb *bulo*, in the literary language, beginning with the middle of the nineteenth century“, the instrumental of the agent is also becoming frequent (143). Shevelov (1963) finds it difficult to attribute the high frequency of *bulo* in *-no*, *-to* clauses to the Russian influence alone, and is inclined to ascribe it rather to the language internal factors.

The Russian influence is however clear in setting accusative assigning *-no*, *-to* equal to agreeing participles that designate a state. Such confusion is obvious from the sentences in which *-no*, *-to* predicates co-occur with agreeing participles, cf. *Diža<NOM\_a-decl> sered xaty verch dnom postavlena<AGR>, solomy<GEN\_part> svižoji, pachučoji husto naslano<NTF>*; or when impersonal *-no*, *-to* clauses are employed to convey a state, cf. *Skriz' po travi rozkydano<NTF> bulo<AUX\_past> temni j bili postati<ACC/NOM\_pl\_inan> šachtariv*; or when the copula *bulo* is put into the structure of *-no*, *-to* that do not designate absolute past. Even though *-no*, *-to* in modern Ukrainian are no longer directly linked to the system of passive participles (since they had been re-interpreted into impersonal clauses), Shevelov (1963) argues that *-no*, *-to* predicates have never lost their contact to personal clauses headed by neuter singular nouns or pronouns syncretic between nominative and accusative, or by a pronoun *vono* in the subject position, cf. *Ne vse, ne vse<ACC/NOM\_pron> promovleno<NTF> v slovax; Čy vono<ACC/NOM\_pron> porobljeno<NTF> čy vono<ACC/NOM\_pron> naslano<NTF>? Nadis' kym naslano<NTF>*. Such folksy exx demonstrate that the connection between impersonal *-no*, *-to* and personal participial sentences has never been completely broken. Therefore, Shevelov (1963) believes that the copulas *bulo* and *bude* could have been transplanted from the vernacular into the codified Ukrainian (145-146). Besides,

Shevelov (1963) observes that the use of future copula *bude* and of the instrumental agent is „on the whole rare and does not constitute the rule“. Generally, there is a tendency in modern Ukrainian to extend the syntactic environments of *-no*, *-to* predicates, e.g. to employ the accusative assigning *-no*, *-to* in infinitival structures with modal verbs, cf. *maje*<MOD> *buty*<INF> *pokazano*<NTF> *nyzku*<ACC\_a-decl> *smišnych vypadkiv* (145).

As a matter of fact, modern Ukrainian *-no*, *-to* predicates are attested with and without tense marking auxiliaries, while the presence of copula might (but does not have to) trigger the pluperfect interpretation. Discussing the tense marking auxiliaries in *-no*, *-to* predicates in modern Ukrainian, Pugh and Press (1999) observe in their textbook that the copula *buty* is not obligatory in *-no*, *-to* clauses, and it is even „felt to be superfluous: the PPP [in *-no*, *-to*] expresses the past tense in and of itself“. If employed in the structure of *-no*, *-to*, the copula will be in the form of *bulo*, „agreeing with the impersonal form in *-no*, *-to*; in such a case, this form may reflect a pluperfect sense“, cf. *Pry Sofijs'komu sobori bulo*<AUX> *zasnovano*<NTF> *školu* (252). The observation of the arbitrary nature of copula *bulo* in *-no*, *-to* predicates suggests that the Canadian authors Pugh and Press (1999) interpret the Ukrainian *-no*, *-to* structures as a repercussion of their Polish cognates, since they stick to its original Polish-like past time interpretation.

Whereas the past copula *bulo* is fully acceptable, but can be simply felt as superfluous in Ukrainian *-no*, *-to* predicates, the future copula *bude* is, according to Blevins (2003) much less acceptable, even though such exx have been attested in literature. Wieczorek (1994) attributes the tacit anomaly of Ukrainian *-no*, *-to* predicates with future tense marking to the perfective meaning of *-no*, *-to*, since there is little practical necessity to designate a resultative state in the future (29). Blevins (2003) remarks that the rare use of *bude* can also be due to the “residual prescriptive stigma“ coined in early 20<sup>th</sup> c. Such tacit incompatibility of synchronic Ukrainian *-no*, *-to* predicates with future tense marking auxiliaries seems to strengthen their connection to the system of passive past participles in modern Ukrainian. Blevins (2003) further remarks that such connection might even result in a „wholesale passive reinterpretation“ of *-no*, *-to* predicates, especially given the passive status of their Russian cognates (493). Note that for Billings and Maling (1995), the re-analysis of Ukrainian *-no*, *-to* predicates into passive predicates has already been successfully completed (87-88, fn).

Frequently it is argued that Ukrainian copula-less *-no*, *-to* render the perfect, and those with overt copula the aorist or simple past reading. Such is the take of Synjavs'kyj (1941, §146), Filin (1972, 496) and Bulachovs'kyj (1977, 482). Petlyčnyj (1960) argues that overt past and future tense marking auxiliaries in Ukrainian *-no*, *-to* construction add a pluperfect

and future perfect interpretation respectively. Describing the temporal meaning of this peculiar construction, Shevelov (1963) interprets *-no*, *-to* clauses used without any tense marking auxiliaries as perfective (139). To convey the absolute past tense, or pluperfect, Shevelov (1963) adds, the overt copula *bulo* is used (140). In similar vein, Kovaliv (1947) claims that accusative assigning *-no*, *-to* predicates can only be used to designate the action that has barely taken place at the moment of speaking (6). Besides, this construction can only refer to the human action in its end result. Consequently, sentences like *hory*<sub><NOM/ACC\_pl\_inan></sub> *vkryto*<sub><NTF></sub> *lisamy*<sub><INST\_inan></sub> are, according to Kovaliv (1947), not grammatical (8). The deviations from this rule can only occur for stylistic purposes, i.e. as personification in poetry (9). Besides, Kovaliv (1947) comments on the redundancy of the copula *bulo* to designate the past action with *-no*, *-to* predicates, since they already designate the past without any auxiliary. The tense marking auxiliary *bulo*, according to Kovaliv (1947), can only be employed to mark the pluperfect meaning of the clause (10). The future tense copula *bude* is used to designate the future (12). In similar vein, in her textbook Leonova (1983) comments that *-no*, *-to* predicates without any tense marking auxiliaries refer to the action in the past. To designate the future action the copula *bude* is used. Leonova (1983) does not mention anything about the possibility of the perfective reading in Ukrainian accusative assigning *-no*, *-to* predicates (238f). Matvijenko (1936, 63) remarks that usually Ukrainian *-no*, *-to* clauses designate „a completed one-time action; therefore they are prefixed“ (cf. Billings and Maling 1995, 48).

Discussing *-no*, *-to* in works of Western Ukrainian writer Ivan Franko (1856-1916), Petlyčnyj (1957) concludes, that most of them are copula-less and render the aorist meaning, emphasizing the action itself, not the effect of it. Petlyčnyj (1957) describes the *-no*, *-to* forms in Franko's writings as constructions akin to the 3<sup>rd</sup> person plural indefinite personal clauses (68). To Matveenکو (1962) copula-less *-no*, *-to* forms in literary language can render either perfect or aorist interpretation, while in Ukrainian dialects the present tense stative reading prevails. To determine the temporal meaning of *-no*, *-to* predicates in contemporary Ukrainian, Matveenکو (1962) offers a simple procedure below: if *-no*, *-to* construction can be replaced with a past tense verb in *-l-*, there is no present tense reading (84). In Ukrainian dialects, the *-no*, *-to* forms can have either a stative present time reading<sup>56</sup>, e.g. *teper tam porivnjano*<sub><NTF></sub>; or a perfective reading, e.g. *bač jaka, na semerych néseno*<sub><NTF></sub> *umá, a odnomú utúleno*<sub><NTF></sub>; as well as aorist, or simple past tense reading, e.g. *ce todí kolý nímci*

56 Generally and in contrast to Matveenکو's claims, the temporal scope of the synchronic *-no*, *-to* predicates in Ukrainian is believed to exclude the simple stative present tense reading (the perfective reading is however not excluded).

*orestuvály... niméc'koho načál'nyka*<ACC/GEN\_m\_anim> *ubyto*<NTF> *hranátoju* (85). Whether *-no*, *-to* render perfective or aorist/simple past interpretation is usually obvious from the context. The *-no*, *-to* rendering aorist interpretation usually co-occur with predicates in the form of past tense verbs, as well as nominal and participial two-member structures with the past tense auxiliary. The use of copula-less *-no*, *-to* predicates in a chain of successive events expressed with constructions mentioned above speaks for their aorist interpretation, e.g. *nímcy... ljuděj striljály, dvóh vývėly, tak voný jak turnúly nímciy, a sámi tikát', odnoho*<ACC/GEN\_m\_anim> *zrázu na póli ubyto*<NTF>, *a odýn lisom pobíh* (87). Then Matveenko observes that copula-less *-no*, *-to* in Ukrainian dialects and agreeing participles without an overt copula in standard Russian overlap in meaning, both rendering perfect interpretation, whereas a copula-less aorist interpretation in Ukrainian dialects corresponds in meaning to the Russian canonical passive construction (87-88). Still, as Matveenko (1962) remarks, there are cases when the context does not help to interpret the meaning of *-no*, *-to* with certainty. Such is the Ukrainian *ex na vidbudóvu c'oho budýnku výtračeno*<NTF> *sýlu*<ACC\_a-decl> *hrošej*. Translated into Russian this *ex* would have an ambiguous interpretation, i.e. either *Na stroitel'stvo éтого doma istračeno*<NTF> *ochen' mnogo deneg* (emphasis on the present state of events) or *Na stroitel'stvo éтого doma bylo*<AUX> *istračeno*<NTF> *ochen' mnogo deneg* (emphasis on the fulfilled action in the past) (88). Matveenko (1962) further observes that copula-less *-no*, *-to* forms in Ukrainian dialects can seldom bear the pluperfect meaning, i.e. *os' sobrálysja na drúhu nič, pryvezly viz droj, a na c'jomu vozi prykrýto*<NTF> *drovamy hvyntóůky*<NOM/ACC\_pl\_inan> (88).

Of special importance to the investigation of overt tense marking auxiliaries in synchronic *-no*, *-to* clauses is a recent corpus based study by Charčenko (2011). Discussing the use of copula *bulo* and *bude* with *-no*, *-to* predicates, Charčenko (2011) has set a goal to determine the factors that influence its presence or its absence in contemporary Ukrainian (44). It is clear from her article, that up to the recent time (the year 2011) the question of legitimacy of overt tense marking auxiliaries in *-no*, *-to* predicates has not been successfully clarified (45). Charčenko (2011) observes that although many authors avoid the direct confrontation with the tricky question of tense marking auxiliaries, the textbooks of Soviet Ukraine generally tend to allow the use of the copula *buty* with predicates in *-no*, *-to*<sup>57</sup>.

Then Charčenko singles out 3 core attitudes that have tried to tackle the problem of overt tense marking auxiliaries in Ukrainian *-no*, *-to* predicates: 1.) the categorical denial of

57 cf. *Kurs sučasnoji ukrajins'koji literaturnoji movy. Syntaksys* vol. 2, (1951) by Bulachovs'kyj; *Kurs sučasnoji ukrajins'koji literaturnoji movy. Syntaksys* by Kulyk (1965); *Ukrajins'ka mova* by Juščuk (2004); *Sučasna ukrajins'ka dilo va mova* (2003) by Zubkov (48). Bilodid in his *Sučasna ukrajins'ka literaturna mova. Syntaksys* (1972) however ignores the question altogether. Žovtobrjuch in his *Ukrajins'ka literaturna mova* (1984, 212) ignores it as well (cf. Charčenko 2011, 49).

tense marking auxiliaries in *-no*, *-to* predicates expressed by Hladkyj (1930), Horec'kyj (1929), Dloževs'kyj (1928), Simovyč (2005), Smeryčyns'kyj (1932/1990), Sulyma (1928/1988), Matvijenko (1936), Zatovkanjuk (1984), Wieczorek (1994). 2.) the restricted, context related use of tense marking auxiliaries with *-no*, *-to* predicates, dependent on the semantic structure of the clause, speaker's communicative and pragmatic purpose, supported by Bevzenko (1954), Bulachovs'kyj (1948), Petlyčnyj (1960), Puhač (1996); and 3.) the suggestion that the use of copula *buty* in accusative assigning *-no*, *-to* predicates corresponds to the norms of the Ukrainian phrase structure, shared by Hruns'kyj (1927), Izjumov (1926), Synjavs'kyj (1931), Čyrva (1977) (45).

In sharp contrast to the general confusion registered elsewhere in literature, Slyn'ko (1994) claims that the problem of temporal meaning, that is the presence or absence of overt tense marking auxiliaries in *-no*, *-to* predicates has been successfully resolved. Slyn'ko (1994) suggests to differentiate between the morphological and syntactic tense of accusative assigning *-no*, *-to* predicates. From the morphological standpoint there are past perfect, absolute past/aorist and future tenses, while from the syntactic standpoint there are present, past and future tenses. It is especially reasonable to differentiate between morphological and syntactic tenses in case of the neuter copula in the past tense and the 3<sup>rd</sup> person singular copula in the future tense. Slyn'ko (1994) also mentions that sentences with *-no*, *-to* predicates have a six-fold paradigm: there are three types of the indicative mood, namely presence, past and future tense type; and there are three types of the conditional mood, that is simple conditional (*umovnyj prostyj*), optative (*bazal'nyj*) and incentive (*sponukal'nyj*) (206). Charčenko (2011) remarks however, that the conditional mood synchronically seems to represent a marginal phenomenon in *-no*, *-to*, since there are only a couple of *-no*, *-to* predicates employed to syntactically express the conditional mood in her corpus of texts (more than 3000 records of accusative assigning *-no*, *-to* construction have been investigated). These are rare conditional clauses like *jakoho*<ACC/GEN\_m\_anim> *bulo*<AUX> *b*<mod\_part> *ubyto*<NTF> (49). Besides, the possibility of the conditional meaning expressed by *-no*, *-to* predicates is far from been agreed upon. Horjanyj (1984) for instance categorically rejects the possibility of *-no*, *-to* predicates in subjunctive mood, arguing that predicates that convey the resultative meaning cannot undergo any but temporal modifications (62-63; cited in Charčenko 2011, 50). Bilodid (1972) however observes that *-no*, *-to* forms convey the action in its result, not in its process, and are employed to designate the simple past, aorist, future and conditional meaning (251).

In order to determine the productivity of *-no*, *-to* predicates with copula in contemporary Ukrainian, Charčenko (2011) has analyzed more than 3000 sentences with *-no*,

-to predicates in scientific texts like monographs, candidate works, text-books, in belletristic, journalistic writings, and newspapers. The texts she worked with have originated in different regions of Ukraine. Their authors are both male and female. Charčenko's (2011) analysis has shown, that in scientific works the -no, -to predicates usually occur without any overt tense marking auxiliaries. In theoretical works on philology, economy, technology and medicine, about 10 % of all -no, -to forms occur with the overt past copula *bulo*. In scientific works on history, psychology and pedagogy they constitute about 15 % of all -no, -to forms attested (50). In belletristic and literary works she analyzed, 30% of all -no, -to predicates occur with past or future copula. Needless to say, that present copula is not used in modern Ukrainian. In belletristic, literary and journalistic works there 35 cases of -no, -to forms altogether. The copula *bude* has been attested only once in her scientific corpus of texts<sup>58</sup>. The use of future copula *bude* is apparently more frequent in socio-political context than in other text types (53).

Charčenko (2011) comments that the accusative assigning -no, -to forms tend to have the resultative meaning in scientific literature. Moreover, the past copula *bulo*, if available, can usually be left out without any change in the temporal meaning of -no, -to predicates. Although Charčenko (2011) does not state it explicitly, several of her -no, -to exx (51-52) with copula might denote pluperfect. Finally, Charčenko (2011) concludes that both prescriptive and pedagogical literature of the past hundred years has not agreed upon the use of overt tense marking auxiliaries with accusative assigning -no, -to predicates. The use of -no, -to predicates has neither been standardized nor unambiguously codified in Ukrainian grammars. Charčenko (2011) concludes that accusative assigning -no, -to forms in contemporary Ukrainian usually have either perfective or aorist interpretation and tend to occur without any overt tense marking auxiliaries in their structure. The copula *bulo* seems to have an arbitrary character and can be left out altogether without any change in meaning. The regional factor does not play any role in the use of tense marking auxiliaries in -no, -to clauses. Charčenko (2011) concludes that the copulas *bulo* and *bude* tend to be present either to denote an action in the past that took place before another action in the past (pluperfect meaning), or if there is some reference to the duration of the action in the past, or if the speaker's intention is to emphasize an intended action in the future, not the doer of this action (53-54).

The accounts on the tense marking auxiliaries in the structure of -no, -to historically

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58 Unfortunately Charčenko does not mention anything about the size of any of her corpora; we hope that her sub-corpora are approximately of equal size.



are disperse and confusing as well. Bulachovskyj (1950) assumes that the present tense marking auxiliaries *byt'*<sub><AUX\_inf></sub> and *sut'*<sub><AUX\_pres\_3rd-pl></sub> in Middle Ukrainian texts is a Church Slavonic element (378). Jedlins'ka (1961) interprets the present copula *est'*<sub><AUX\_pres\_3rd-sg></sub> in the 17<sup>th</sup> c. *-no, -to* record *Vojsko vse ych'' kvarjan''oe do ščadku est'*<sub><AUX\_pres></sub> *razbito*<sub><NTF\_pf></sub>, stemming from the letters of the Ukrainian hetman Bohdan Chmel'nyc'kyj, as a remnant of the Church Slavonic bookish tradition as well (41). Bulachovs'kyj (1977) observes that the present copulas *est'* and *sut'* on passive past participles in administrative texts of Middle Ukrainian represent the imitation of the Polish personal passive, and, in a broader sense, of the Latin pattern. At least in the 18<sup>th</sup> c., if not earlier, the tense marking auxiliary *sut'* is regarded as archaic in Ukrainian. The present copula *buty* in the 1<sup>st</sup> and 2<sup>nd</sup> person plural is even more rare at this time. The use of the present copula in passivoid phenomena is described by Bulachovs'kyj (1977) as exclusively ornamental [„*suto ornamental'ne*“], that is, as a fancy stylistic embellishment (496-497).

Matveenکو (1962) has investigated the use of the past copula *bylo* in two late 17<sup>th</sup>-early 18<sup>th</sup> c. texts that originated in the left-bank Ukraine: the Eye-Witness chronicle depicting political events of the late 17<sup>th</sup>-early 18<sup>th</sup> c., also known under the name *Litopys Samovydcja*, and the diary of Storozhenko family, describing the years 1683 till 1739, dealing with daily matters narrated in vernacular. The *-no, -to* forms in both texts are predominantly copula-less and can designate either perfect or aorist. The aorist interpretation prevails in the chronicle, while the perfective meaning is more frequent in the diary, which Matveenکو (1962) attributes to the nature and pragmatic purpose of each text. The *-no, -to* forms in the chronicle are usually employed to narrate subsequent events in the past, and consequently have aorist interpretation. The same is true for the past events described in the diary, e.g. *odnak oktovrija 11-ho v večor, z ovturka na seredu, znov zapaleno*<sub><NTF\_pf></sub> *chlěv*<sub><ACC/NOM\_m\_inan></sub> *Dmytra Zarudnoho, i toe*<sub><ACC/NOM\_n></sub> *zaraz utušeno*<sub><NTF\_pf></sub>, *potom znovu 13 oktovrija z četverha na pjatok v večor, ... khdy zapalena*<sub><PPP\_fem></sub> *Mychajla Ševcja chatu*<sub><ACC\_a-decl></sub><sup>59</sup>, *i znovu tam vedlju bašty na tom že časě Sydorovu chatu*<sub><ACC\_a-decl></sub> *zapaleno*<sub><NTF\_pf></sub>, *tohdy zaraz Marko žyd povedav, ščo bačyv dvoch čolověkov ot toho ohnju běhučych...* (1698) (90).

There are only 3 exx of *-no, -to* predicates co-occurring with the past copula *bylo* in the chronicle, all of them have a pluperfect interpretation, e.g. *...prežde že seho Semen'' Lyzohub'', kotoroho*<sub><ACC/GEN\_m\_anim></sub> *... po plutovskomu něktoroho černca Změevskoho donošeniju, vzjato*<sub><NTF\_pf></sub> *bylo*<sub><AUX></sub> *vě Peterburch'', no vskorě do domov'' otpuščeno*<sub><NTF\_pf></sub>

<sup>59</sup> Matveenکو (1962) does not mention it, but in this clause there seems to be no agreement between the participle *zapalena* and its NP *chatu*.

(1725). The *-no*, *-to* records with copula in Storoženko diary have either pluperfect meaning or the meaning that is ambiguous between aorist and pluperfect, cf. *...yž v selě ych vynajšovsja Stepan Savučenko, kotryj mnoho ljudem pakosty čynyt', pašně mytčenskye pokrav, ktoroho<ACC/GEN\_m\_anim> j pojmano<NTF\_pf> bulo<AUX>; Tedy onyj utekšy z vjazenja, ešče košulju, ubranja ukrav z Luky Mytčenskoho...* (1712) (pluperfect meaning). Since out of about 200 *-no*, *-to* predicates from the 17<sup>th</sup> c. Ukrainian texts investigated by Matveenko (1962) only very few had a past copula, she concludes that the presence of overt copula in historical texts is not necessarily connected to any specific temporal interpretation. Namely, Matveenko (1962) did not establish any direct correlation between the presence of an overt copula and a specific temporal reading in (late) Middle Ukrainian texts she investigated (91). Matveenko (1962) concludes that the temporal meaning of *-no*, *-to* predicates historically resembles the temporal meaning of *-no*, *-to* in modern Ukrainian, whereas the temporal interpretation of *-no*, *-to* in contemporary Ukrainian dialects is even more complicated – the *-no*, *-to* without a copula can have both aorist and perfective meaning, and the *-no*, *-to* with a copula can designate either aorist or pluperfect (91).

Similar to Middle Ukrainian, the copula-less *-no*, *-to* in Middle Belorussian can have either perfect or aorist interpretation. Matveenko (1962) observes that *-no*, *-to* forms as such are practically non-existent in modern literary Belorussian. In modern Belorussian dialects however, *-no*, *-to* forms are attested, and designate perfect if used without any tense marking auxiliary. Similar to Middle Ukrainian texts, the meaning of copula-less *-no*, *-to* in Middle Belorussian texts depends on the context: the copula-less *-no*, *-to* in administrative trial records and official documents usually have perfective reading, cf. *Y mēščaně Dorohyckyy movyly pered" namy: kak" esmo na senožatech" eho ne stojely, tak esmo syna eho ne byly, any ymaly; bezvynne nas"<ACC\_pron> poymano<NTF\_pf>* (1520). Still, the aorist interpretation is encountered as well, e.g. *ouslyšavši to cesar – pal na zemlju i byl jęko vmerlyi, až eho<ACC/GEN\_sg\_m> vodoju wtlyvano<NTF\_pf>. Potom vstavšy povědal im movjęčy* (91-92).

Matveenko (1962) reports to have found only 16 *-no*, *-to* forms with past tense copula in Middle Belorussian texts, while those without any copula have been attested in hundreds (92). These 16 records have either aorist or pluperfect interpretation, cf. *Jakož" dej o tot" khvalt", boi<ACC/NOM\_pl\_inan> i rany<ACC/NOM\_pl\_inan> i škody<ACC/NOM\_pl\_inan> spovědano<NTF\_pf> tohdy urjadu tamošnemu zamkovomu i mytropolytu, i prava u neho na tych" khvaltovnikov", vrvjadnikov" i sluh" eho, tohdy ž" za-horjača (khdy ešče rěči tyi zabrany u nych"), bylo<AUX> prošeno<NTF\_impf>* (1544) (aorist meaning); *pryšodšy khvaltom" pered" dvor" moj na Reče, žonou mi zbyly, ssoromotyly, i čeljad' pobily, i životynu svoju powtnymaly, ktorouju<ACC\_a-decl>*

*ž' poimano*<NTF\_pf> *bylo*<AUX> *v'' zbožy moem''* (1517, *Litovskaja metrika*). Matveenko (1962) further remarks that similar to Belorussian and Ukrainian, copula-less *-no*, *-to* in Polish can also designate both aorist and perfect. Especially historically, Polish *-no*, *-to* tend to have perfective instead of simple past (aorist) interpretation (93).

In sharp contrast to Matveenko (1962), Žovtobrjuch (1980), who has analyzed text types different from those investigated by Matveenko (1962), claims that the earliest *-no*, *-to* forms often occur with copula *byti* in present, past or future, listing i.a. the following ex with an *a*-declension noun in the NP of *-no*, *-to* predicates that co-occur with the tense marking auxiliary: *i(ž) mi, de(i), bylo*<COP\_past\_ru> *včinenno*<NTF\_pf> *škodu*<ACC\_a-decl> (1583, cited from *Aktova knyha Žytomyrs'koho mis'koho urjadu kincja XVI st.*, 45). In approaching the 18<sup>th</sup> c. *-no*, *-to* forms apparently tend to be used without any overt tense marking auxiliaries, especially in text sections written in vernacular, cf. *Ostika*<ACC/GEN\_m\_anim> *za zradu stjato*<NTF\_pf> (1633, *Ostroz'kyj litopysec'*, 242). Žovtobrjuch (1980) claims that the copula *byti* has never completely disappeared from the structure of *-no*, *-to* though (287). Similarly, Arpolenko at al (1983) reports that early *-no*, *-to* records frequently occur with present, past and future copula; copula-less *-no*, *-to* are less frequent than those with overt copula in Old Ukrainian literary texts, which is especially true for religious polemics (279). The text type usually determined the presence or absence of overt tense marking auxiliaries, i.e. in chronicles *-no*, *-to* forms occur both with and without overt copulas. In official documents and charters the constructions usually occur without any tense marking auxiliary. The vernacular seems to favor copula-less constructions as well (41). Arpolenko (1983) reports the occurrence of semi-notional [*napivpovnoznačni*] auxiliaries like *staty* „become“, *zdavatysja* „appear“ in place of copula *byti*<AUX\_inf\_ru> in periphrastic passive constructions in Middle Ukrainian (38). Bevzenko at al (1978), observes that in addition to the copula *byti*, that is usually used as an auxiliary verb in Middle period, there is also an auxiliary verb *zostati*, attested from the 17<sup>th</sup> c. onwards, and interpreted as a Polish element (308-309). Besides, the *-no*, *-to* structure with direct object complement has been attested in combination with aorist copula *byst'*, cf. *Prepodobnago*<ACC/GEN\_m\_anim> *že vskore uvideno*<NTF> *byst'*<AUX\_aor> (Doros 1975, 93).

Reading the literature on diachronic Polish *-no*, *-to* gives an impression that the tense marking auxiliaries in their structure were regularly attested in Middle Polish period, and were dropped only by the mid-17<sup>th</sup> c. Still, scrutinizing the exx of Polish *-no*, *-to* with tense marking auxiliaries suggests that we are in fact operating with few records repeated in literature. The most cited record is probably Österreicher's (1926) ex from the year 1624: *Barwierka, chcąc się w tym paniej zachować, rozebrała się, którą pani powrozem onym, co*

*jq*<ACC\_a-decl> *było*<WAS> *przywiązano*<NTF\_pf>, *przywiązała do słupa onego*<sup>60</sup> (57). It is also the only one of the inflectional class which distinguishes the accusative morphologically from both nominative and genitive that we have been able to locate in literature. It is astonishing that neither Shevelov (1968)<sup>61</sup>, nor Pisarkowa (1984)<sup>62</sup>, nor Klemensiewicz (1974/1985) have any ex(x) of *-no*, *-to* predicates with a tense marking auxiliary *było* co-occurring with the unmistakably accusative marking on the underlying object of *-no*, *-to*. The copula *zostać* in the past tense has not been attested at all<sup>63</sup>.

Klemensiewicz et al (1971) is quoting two Polish *-no*, *-to* clauses from the first half of the 16<sup>th</sup> c. with the overt copula *było*. Both exx seem to designate pluperfect, cf. *Udręczenie ojca S. było dla tego tym większe, iż wiedział, iż w jednym mieście tychże czasow zabito*<NTF> *było*<AUX> *brata*<ACC/GEN\_sg\_mask> *jednego bardo (!) dobrego; tedy mu drudzy hetmani rozradzili, powiedając, że to dzień niefortunny, bo też v ten dzień Scypiona Afrykańskiego*<ACC/GEN\_sg\_mask> *było*<AUX> *barzo porażono*<sup>64</sup><NTF> (14). In similar vein, discussing the appearance of the past tense marking auxiliaries in the structure of *-no*, *-to* with direct object complement in 15<sup>th</sup> and 16<sup>th</sup> c. Polish Bible translations, Kowalska (1991) observes after Krążyńska (1978) that *-no*, *-to* clauses co-occurring with past tense copula *było* usually render pluperfect. The pluperfect interpretation is obvious from the exx quoted by Krążyńska (1978), i.e. *Po śmierci tu go*<ACC/GEN\_m\_anim> *było*<AUX\_past> *pochowano*<NTF>, *potem do Wenecji przeniesiono*<NTF>; *Lecz szczęśliwy to dzień, że oboz wszytek nie zniesiono*<NTF>, *bo go*<ACC/GEN\_m\_anim> *aż nazbyt było*<AUX\_past> *rozwleczono*<NTF> (105).

Brajerski (1995) remarks that the auxiliary *jest* very seldom occurs in *-no*, *-to* structures with irrefutable structural accusative<sup>65</sup>, while the auxiliary *było* frequently does, e.g.

60 The same, but shortened ex is also available in Łoś (1927, 298).

61 Discussing Polish *-no*, *-to* predicates before 1450 Shevelov (1968) observes that *-no*, *-to* forms occur both with and without copulas *jest* and *było*. The *-no*, *-to* structures do not seem to differ from personal *-no*, *-to* clauses in any particular way at this time. Shevelov concludes that the use of tense marking auxiliaries does not play any essential role in the process of formation of Polish accusative assigning *-no*, *-to* predicates (207). We quote some of his exx below: *to rakoyemstwo yest popelnono* (201); *tedy więc mu jest było to imię August[us] dziano* (201); *A tedy więc jest (ci) jím (to) było przez świętego anjoła tako odpowiedziano* (204); *i dano jest ziemię za ziemię prawym targiem* (206) [cursive as in original].

62 Pisarkowa's (1984) 15<sup>th</sup> and 16<sup>th</sup> c. Middle Polish exx: *...te dva wierszyki na ścianie było napisano* (citing Koch II 240); *I dla tego to za przodków naszych poczyniono było na sejmach statuta; To tedy niech będzie powiedzino, iż wielmożność jest cnota; ...projektów było gwałt narzucono* (citing Klemensiewicz) (42) [cursive as in original].

63 Brajerski (1972) observes that the copula *zostać* has been first attested in periphrastic passives in the second part of the 17<sup>th</sup> c., but it was hardly employed before the second part of the 19<sup>th</sup> c., being confined to literary language and used predominantly to designate the past (38).

64 Similar ex is available in Łoś (1927), i.e. *Scypiona było barzo porażono* (298).

65 Besides *-no*, *-to* structures with copula *jest* historically seem to be used parallel to agreeing passives in *-ne*, *-te*, e.g. *we mnie zamęczone jest serce moje; ani imię jego słyszane jest przy krzcie naszym...* (Grzegorz Paweł z Brzezina, z materiałów A. Podgórskiego, cited in Brajerski 1995, 469). Canonical passives in *-ne*, *-te* in Middle Polish are also encountered with future copula, cf. *I będzie jako drzewo, które szczepione jest podle stoków wód* (before 1543); as well as in combination with modal verbs, cf. *Ty nie miej za stracone, co może*

*To też capitulum owszejki zbywa, bo je jest<AUX\_pres> już położono<NTF> w kapitule Expedit; Natychmiast sie podniósł, który był umarł, a związano<NTF> jemu było<AUX\_past> ręce i nogi; Że onym bohaterem [...] godzien był iście na wszem, by go było<AUX\_past> zwano<NTF>; aby cie było<AUX\_past> pirwej w sztuki zsiekano<NTF>, niżem ja do twej gospody iść pomyślił!; myśliła, aby<PART> już jej syna miłego umęczono<NTF>; A natychmiast przykazał, aby<PART> łódkę uczyniono<NTF> z rokiciny (475). Besides, Brajerski (1995) observes that -no, -to forms with direct object complement have also been attested with the present habitative existential copula *bywa* and the past habitative existential copula *bywało*, e.g. *bo z owocu bywa<AUX> poznano<NTF> drzewo<NOM/ACC\_n>; ziele<NOM/ACC\_n> [...] bożą mocą bywało<AUX> osłodzono<NTF>*. Besides, the -no, -to predicates occur with the future copula *będzie* and the future imperative copula *bądź*, e.g. *bo wszelkie drzewo<NOM/ACC\_n> nie czyniące owoca dobrego wyrębiono<NTF> będzie<AUX>; Bądź<AUX> imię<NOM/ACC\_n> jego błogosławiono<NTF> na wieki (469)*. Even though Brajerski (1995) does not state it explicitly, several of his exx with past copula *było* suggest that it was employed to designate pluperfect, cf. *Gdy jednego czasu królowi jm. przywiedziono<NTF> było<AUX> z Niemiec niemało<Q> pięknych frezów wronych, król jm. radził sie z panem koniuszym a z panem obożnym, co by za rząd dać na nie miał (471)*.*

Klemensiewicz (1985) observes that while -no, -to forms in Middle Polish function as active predicates, they may still function as passive-participial predicates in Old Polish, and as such co-occur with the copula *jest*, *było* and *będzie* respectively. The -no, -to forms basically occur in 3 different syntactic environments in Old Polish: either in personal sentences with tense marking auxiliaries, e.g. *owa postawiono<NTF> jest<AUX> wszystko<Q> przed oltarzem bożym; nie obleczesz się w rucho, jeż to<PRON> z welny a ze lnu tkano<NTF> jest<AUX>;* or in personal sentences with a dropped copula, e.g. *a popędzono<NTF> sierce<NOM/ACC\_n> ludzkie ku działaniu;* or in impersonal sentences with direct object complements, that can occur with and without tense marking auxiliaries, e.g. *Adamowi było<AUX> naleziono<NTF> pomocnika<ACC/GEN\_m\_sg> podobnego jemu; jako jest<AUX> przeproszono<NTF> Błęda<ACC/GEN\_m\_anim> ta tę głowę i zapłacono (121)*.

Klemensiewicz (1965, 432) remarks that tense marking auxiliaries were used not only in -no, -to clauses headed by lexical neuter singular nouns in the subject position, but also in impersonal clauses with NPs other than neuter singular, cf. *jako jest<AUX> przeproszono<NTF> Błęda<ACC/GEN\_m\_anim> ta tę głowę i zapłacono, każdy ssąd złoty darom bożym wyłączono<NTF> jest<AUX\_pres> (15<sup>th</sup> c.)*. Such impersonal -no, -to structures have frequently been attested with the past copula *było*, cf. *lata Pańskiego był wielki mor w Polsce wszędzie, i drugiego roku*

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*być wrócone (470).*

*takież a przyniesiono<NTF> go<ACC/GEN\_m> było<AUX\_past> z Węgier (16<sup>th</sup> c.); kiedyby krola<ACC/GEN\_m\_anim> o to za dobrego zdrowia było<AUX\_past> pytano<NTF>, nie co by był inszego powiedział (16<sup>th</sup> c.); jako tego dojrżeli, żeby było<AUX\_past> Gdańszczany<ACC/NOM\_pl\_anim>, jeśli winni, pokarano<NTF>, albo jeśli niewinni, żeby ich<ACC/GEN\_pl\_anim> było<AUX\_past> nie drażniono<NTF>, żeby było<AUX\_past> Wobsera<ACC/GEN\_m\_anim>, ażby się był sprawił, nie wypuszczono<NTF>, żeby portu<GEN> gdańskiego nie każono<NTF> (16<sup>th</sup> c.); jako tego przestrzegali, aby było<AUX\_past> Wołochów<ACC/GEN\_pl\_anim> nie drażniono<NTF> a Pokucia<ACC/NOM\_n> nie wypalono<NTF> (16<sup>th</sup> c.); sfukano<NTF> było<AUX\_past> Stańczyka<ACC/GEN\_m\_anim> naszego, iż był coś plugawego rzekł u stołu przy fraucmerze (16<sup>th</sup> c.); Cicero miał brata nie wielkiego wzrostu, którego<ACC/GEN\_m\_anim> było<AUX\_past> wymalowano<NTF> tylko do połowice (16<sup>th</sup> c.); znać, że cię<ACC\_pron> było<AUX\_past> gdzieś w chlewie przywarto<NTF>, musiałaś trzy dni nie jeść (16<sup>th</sup> c.)<sup>66</sup> (433-434).*

Discussing the conditional in modern Polish, Hansen (2010a) observes, that these it “is formed by the agglutination of morphemes: a lexical root, a stem marker, an agreement marker for gender and number, the morpheme *by*, plus a closing ending” (2). Jodłowski et al (1968) is listing exx of the subjunctive *-no*, *-to* clauses with the complementizer *by* in the structure of *-no*, *-to* in modern Polish. The subjunctive particle *by* is encountered either in post-position to the *-no*, *-to* predicates, i.e. *Otwarto<NTF> by<C> tam świetlicę; Spis ukończono<NTF> by<C> wcześniej* (130) or in pre-position to *-no*, *-to*, i.e. *Żądal, by/aby<C> się tym zainteresowano<NTF>* (131). Discussing *-no*, *-to* predicates in the subjunctive mood Wieczorek (1994), introduces a *-no*, *-to* ex with the subjunctive particle *by* in the pre-position to *-no*, *-to*, cf. *Bo by<C> drukarza zabito<NTF>* (54). Likewise Damborsky (1967) observes that, as finite verbs, Polish *-no*, *-to* clauses employ the modal particle *by* to form the subjunctive mood, i.e. *tanczonoby, spiewanoby*, which makes them similar to active predicates. Brajerski (1995) takes the very fact that the particle *by* cliticizes to *-no*, *-to* predicates (and not to the tensed verb) as the evidence for the presence of active voice head in the structure, arguing that if *-no*, *-to* were a passive structure, auxiliaries *było* or *zostało* would have appeared in the structure of *-no*, *-to* and the modal particle *by* would encliticize to them. Such syntactic operation is in fact ungrammatical, cf. *\*Zostałoby (byłoby) schwytano<NTF> złoczyńcę, \*Byłoby jeżdżono<NTF> tą drogą, \*Musiałoby (zaczęłoby) być jeżdżono<NTF> tą drogą* (462)<sup>67</sup>. Wolińska (1978) mentions that all *-no*, *-to* records in her corpus of texts are of imperative mood.

66 The majority of these exx above are also available, with slight orthographic deviations, in Österreicher (1926, 56).

67 Related observation has been made by David Embick, who suggested to Billings and Maling (1995) that „the fact that *by* encliticizes to the *-no/-to* word is evidence that this word has raised to I (the inflectional functional head); *by* otherwise encliticizes to the tensed verbal stem“ (17).

Theoretically however it is possible to transform any personal conditional sentences into subjunctive *-no*, *-to* clauses, provided the indicator of the subjunctive mood, namely the particle *by*, is preserved i.e. *Może ktoś podałby<C> nam herbatę* vs. *Może podano<NTF> by<C> nam herbatę* (70).

Historically the Polish conditional is envisioned by Hansen (2010a) as a form, that “goes back to a periphrastic form consisting of an active participle formed with the suffix *-l-* and the copular *być* [that] originally had the function of a pluperfect. In Protoslavonic, the copular was in the inherited synthetic conditional which in Old Polish was replaced by the aorist form. The copular functioned as an autonomous auxiliary whose position in the sentence was relatively free. Starting from the 15th century, the forms of the copular eroded and merged with the likewise shortened forms of the auxiliary *być* used in the perfect tense” (3)<sup>68</sup>. Hansen (2010) concludes that this “form has an agglutinative structure which sets it apart from the old synthetic morphological categories. From a typological point of view, the conditional can be labeled a ‘modal affix’ in the sense of de Haan (2006: 32ff.)” (12).

Kowalska (1991) reports that out of 57 *-no*, *-to* forms attested in the Wujk Bible, there 10 *-no*, *-to* forms in conditional mood, and 47 in active mood (193). Historically the past copula *było* in the structure of *-no*, *-to* predicates is reported to co-occur with the complementizer *aby*, and its equivalents modal particles *żeby*, *iżaby*, *čtoby*. One of the Lavine's (2013) 16<sup>th</sup> c. Polish exx *Przykazał, aby<C> łódkę uczyniono<NTF> z rokiciny* illustrate the anomalous occurrence of *-no*, *-to* predicates with the modal particle *aby*, but without any tense marking auxiliaries. Lavine (2013) claims after Österreicher (1926) that historically such *-no*, *-to* in subjunctive mood introduced by the complementizer *aby* obligatorily occurred with a past auxiliary (15). In fact out of numerous Österreicher's (1926) exx<sup>69</sup> of *-no*, *-to* predicates used with a modal particle, only one of them, a 1588 ex from Kochanowski, occurs without any tense marking auxiliary, i.e. *A Hektor dwu slug posłał, áby<C> owiec dwoie przygnano<NTF> (= przygnāno), á Priámá<ACC/GEN\_m> záowołano<NTF> (záowołāno) z Troie* (30). In similar vein, Kuraszkiewicz (1981) observes that impersonal *-no*, *-to* clauses in subjunctive

68 Hansen (2010) observes that the conditional in modern Polish can be described as “the result of grammaticalization process leading from an analytical morphological structure to an agglutinative one. As it originally goes back to an auxiliary plus participle, the modern conditional shows a) gender agreement and b) the same personal endings like the past tense and the copular” (3).

69 In Österreicher's (1926) exx complementizers *aby* and *żeby* co-occur with tense marking auxiliary, cf. *Jako tego dojrżeli, żeby było Gdańszczany, jeśli winni, pokarano, albo jeśli nie winni, żeby ich było nie drażniono, żeby było Wobsera, ażby się był sprawił, nie wypuszczono, żeby portu gdańskiego nie każono; Jako tego przestrzegali, aby było Wołochów nie drażniono a Pokucia nie wypalono* (56); *Jako tego opatrzyli, żeby było statut skonkordowano i skorrygowano, aby więcej na sądach wątpliwości ani trudności nie było* (57) [cursive as in the original].

mood in Old Polish co-occur with the copula *było*, cf. *aby*<C> *było*<AUX> *posłuchano*<NTF> *głosu*, *pojmano*<NTF> *by*<C> *cię było*<AUX> (17<sup>th</sup> c.). In contrast, conditional *-no*, *-to* clauses in modern Polish never trigger tense marking auxiliaries, e.g. *aby*<C> *posłuchano*<NTF>; *aby*<C> *cię posłano*<NTF> (132).

If the subjunctive *-no*, *-to* co-occur with the past copula *było*, the modal particle *by* is encountered either in the post- or in the pre-position to the *-no*, *-to* predicates, e.g. *Też gdziekolwiek plugiem w ogrodzie albo na polach orano*<NTF> *by*<PART> *było*<AUX\_past>; the exx with the complementizer *by* in the pre-position to *-no*, *-to*, are more numerous though, e.g. *Usiłstwo dziewicam czyniący a gwałtem niewiasty pokalający, byłoby*<AUX\_C> *na nie wolano*<NTF>, *nie będą się moc prawem niemieckim obronić; iżby*<C> *prze drugiego ślachcica pirwej jemu było*<AUX> *naganiono*<NTF>; *Pan synowiec [...] chciał, aby*<C> *było*<AUX> *na inszem ogrodzie wymierzano*<NTF> (467); *aby*<C> *doświadczono*<NTF> *było*<AUX> *zapłacenie*<NOM/ACC\_n>; *aby*<C> *złemu diabłu skryto*<NTF> *było*<AUX> *człowiectwo*<NOM/ACC\_n> *milego Jezukrysta* (467-471); *my skazujemy w takiej przytczy, aby*<C> *doświadczono*<NTF> *było*<AUX> *zapłacenie*; cf. *Że onym bohatyrem, o których bajano, godzien był iście na wszem, by go było*<AUX\_past> *zwano*<NTF> (467).

Discussing the use of the complementizer *by* in Eastern Slavonic languages synchronically, Hansen (2010b) remarks that “[t]he structural analysis of *by* has traditionally caused many problems, because it exhibits a wide range of usages some of which are clearly grammatical, but others remind of a purely lexical marker of modality” (4). Hansen (2010b) further observes that the form *by* historically is the original aorist singular 2<sup>nd</sup> and 3<sup>rd</sup> person form, that can be traced back to the periphrastic structure consisting of active participle in *-l-* and the aorist form of *byti* that marked the aspect of the whole structure. The two constituents were syntactically independent. Hansen (2010b) observes, i.a. after Sičinava (2004), that this construction originally designated pluperfect. Since the auxiliary in Eastern Slavonic historically was in loose agreement with the subject, the inflected forms of aorist *byti* were finally lost, with *by* as the only exception. Such development is described by Hansen (2010b) as the „simplification of the paradigm where the shortest form replaced the other elements of the paradigm” (7).

In contrast to Middle Polish, where the modal particles that impart the subjunctive meaning to the *-no*, *-to* clause usually co-occur with tense marking auxiliaries, Bulachovs'kyj (1948) observes that in Middle Ukrainian complementizers like *aby* and *žeby* do not necessarily trigger tense marking auxiliaries into the structure of subjunctive *-no*, *-to* in Middle Ukrainian, cf. *aby*<COMP> *tech jabednikov*<ACC/GEN\_pl\_anim> *vinami karano*<NTF\_impf> *podle*



*ich zasluhi* (1505); *aby*<COMP> *emu i vsej eho polku kompaniji žyvnosty*<GEN\_part> *naležytoji davano*<NTF\_pf> (1678); *Žeby*<COMP> *mja*<PRON> *ne*<NEG> *o vsem tom v svoj čas turbovano*<NTF\_impf>: *I žeb*<COMP> *mni ot dvorskykh sluh skarh*<GEN\_pl\_inan> *nedonošanno*<NTF\_pf> (16<sup>th</sup> c.). Bulachovs'kyj (1948) then introduces later exx in which modal particles and tense marking auxiliaries already co-occur, commenting that such simultaneous use of complementizers and auxiliaries is typical of modern codified Ukrainian, cf. *prosym donesty o tom... panu hetmanu: iž by*<COMP> *nam za prežde zasluženije namy hoda zaplačeno*<NTF\_pf> *bylo*<AUX\_past> (1728); *prykažite, aby*<COMP> *v cilosty... toje*<ACC/NOM\_n> *bylo*<AUX\_past> *dochovano*<NTF\_pf> (1678). However, the use of subjunctive mood without overt tense marking auxiliaries in embedded clauses introduced by a complementizer *ščob* does not completely disappear in later centuries, cf. *Ne na te chiba, ščob*<COMP> *nas*<ACC\_pron> *našoju ž staršynoju pobyto*<NTF\_pf>, *u nevolju poverneno*<NTF\_pf>! (19<sup>th</sup> c.); *Ščob*<COMP> *bačeno*<NTF\_impf>, *ščo pyl'ni j ščyri my* (20<sup>th</sup> c.). In texts from recent centuries however, the lack of tense marking auxiliaries in *-no*, *-to* clauses with conditional meaning produces an archaic stylistic effect (35-36).

### 3.2.3. Agent expressions in the structure of *-no*, *-to*

Wieczorek (1987/1994) observes that the possibility of instrumental agent expressions in accusative assigning *-no*, *-to* was actually disputed until the 1930s. Namely, it was questioned whether instrumental agent corresponded to the norms of the Ukrainian phrase structure. The discussion continued well into the 1960s-1970s, so that Sjatovskij (1963a) still prohibits overt agent expressions in both Ukrainian and Polish *-no*, *-to* clauses, explaining that there is an implied indefinite doer in both languages (70); likewise Burjačok (1970) bans the overt instrumental agent in Ukrainian *-no*, *-to* predicates, even though there are such exx in popular magazines (94f). Finally, in 1972 the Ukrainian Academy of Sciences legitimizes the presence of overt agent expressions in accusative assigning *-no*, *-to* clauses (cf. Wieczorek 1987, 552). So that Bilodid's Grammar (1972) comments that the instrumental in *-no*, *-to* predicates, in addition to its regular meaning of a tool, can infrequently designate an acting person (251). Nedashkivska Adams (1998), drawing on a large corpus of modern Ukrainian texts has shown that, contrary to the normative prescriptions, modern Ukrainian *-no*, *-to* clauses are not restricted in their ability to trigger agent expressions (198). In similar vein, Franks (1995) remarks that in contemporary Ukrainian instrumental agent expressions freely co-occur with *-no*, *-to* predicates (353).

Generally there is less controversy as to the use of overt agent expressions and copula

in *-no*, *-to* predicates during the later decades. Both Soviet and non-Soviet linguists observe that Ukrainian *-no*, *-to* clauses can trigger agent expressions and tense marking auxiliaries. There are however certain discrepancies as to the shape and distribution of agent expressions. Jižakevyč (1975) argues, that the position of the semantic subject in *-no*, *-to* forms can be filled in with the agent expression in the instrumental case. The use of instrumental in the accusative assigning *-no*, *-to* construction however does not follow the norms of the literary Ukrainian, even though there are rare instances of *-no*, *-to* with instrumental agent in official documents. The subject of such constructions is implicit and indefinite (257-258). Kovaliv (1947), a prescriptive mid-20<sup>th</sup> c. account on synchronic *-no*, *-to*, even argues that accusative assigning *-no*, *-to* forms, as active structures, do not tolerate instrumental agent expressions. Thus the sentences like *Mnoju*<INST> *napysano*<NTF\_pf> *lysta*<ACC/GEN\_m\_inan> are ungrammatical in modern Ukrainian, since they clearly represent the Russian syntactic element. Kovaliv (1947) does not allow the agentive use of instrumental with a group of people in the NP either, only permitting the instrumental of means (13). In the personal sentences with predicates in *-nyj*, *-tyj*, Kovaliv (1947) continues, the instrumental of agent is quiet natural, as in any canonical passive construction (14). Still a more recent account, Franks (1995), claims that agents are optionally expressed as instrumental adjuncts in both *-no*, *-to* and nominative passive participles (343).

Wieczorek (1989) restricts the use of instrumental agent in Ukrainian *-no*, *-to* predicates to the journalistic style, and mentions the possibility of the human collective entity to be expressed in the instrumental noun phrase of *-no*, *-to* forms (116). Similar to Shevelov (1963, 141), Wieczorek (1989) attributes the emergence of instrumental agent in Ukrainian *-no*, *-to* predicates to the internally motivated factors, rejecting the relevance of the Russian influence in the establishment of this oblique agent in the structure of *-no*, *-to* (118). Although the instrumental agent in Ukrainian *-no*, *-to* clauses is currently stylistically marked, this restriction is gradually being overcome, so that this agent expression increasingly appears in belles lettres, and even in the spoken language (117). In sharp contrast to Wieczorek, Zatovkanjuk (1984) suggests that the presence of instrumental agent in Ukrainian *-no*, *-to* construction can better be explained as syntactic interference from Russian, namely as the influence of Russian agreeing predicates of periphrastic passives (5-7).

Jižakevyč (1975) introduces the instrumental *ustamy* „by the lips“ as an expression comparative to the agent expression in modern Ukrainian, citing the following example *Ce bulo skazano jogo ustamy* „His lips said this“, and classifies this agent phrase as diffuse due to its semi-agentive, semi-instrumental interpretation (258). Jižakevyč (1975, 264) claims that u-

PP, not the instrumental agent, is the standard agent expression in modern Ukrainian, while the subject expressed in the instrumental oblique is neither standard Ukrainian nor typical of Ukrainian vernacular, even though it seldom occurs in texts of business and chancellery style (272). Similar to Jižakevyč (1975), discussing agent manifestations with *-no*, *-to* forms in modern Ukrainian, Wieczorek (1994) also describes 'u/v' plus genitive as an agent phrase typical for the codified Ukrainian, underlining the essentially agentive and only infrequently possessive nature of such oblique adjuncts (49). In sharp contrast to Jižakevyč and Wieczorek, Fici Giusti (1994) mentions that in contemporary Ukrainian agentive u-PP is not attested with *-no*, *-to* predicates (123). Also Franks (1995) claims, similar to Fici Giusti (1994), and in contrast to Jižakevyč (1975) and Wieczorek (1994), that u-PP does not occur in modern Ukrainian (343).

Žovtobryuch (1980) observes, that in the process of their re-analysis from personal to impersonal, *-no*, *-to* forms, having lost their agreement in gender and case, retained under the influence of Church Slavonic and Great Russian, the possibility to express the subject in the instrumental oblique (287). Žovtobryuch (1980) is listing the following exx for instrumental agent to support his claim: *ižje kakъ koli dъѣvolomъ<INST> rosъsěvceju zlosti . njeprjetjeljemъ ljudskoho pokolen'ę zъjednano<NTF\_pf> bylo<COP\_past\_ru> (no NP) (1433, cited from *Ukrajins'ki hramoty XIV v. i peršoji polovyny XV v.*, 120); *Pisano<NTF\_impf> bo est'<COP\_pres> prorokomъ Ysaiemъ<INST> (No NP) (1598, *Apokrys*); *i svěčki<ACC/NOM\_pl\_inan> hašeno<NTF\_impf> na prokljatie Šuboju<INST> svjaščennikomъ černěhovskimъ*. Žovtobryuch (1980) adds, that under the influence of Polish, the core argument could also be expressed in the oblique ot"-PP and čerez"/(prez")-PP, e.g. *заныжу je(cm)<COP\_pres> дано<NTF\_impf> w(m) науу(x) njepje(ð)ko(в)<INST> (No NP) (1456, *Ukrajins'ki hramoty XV st.*, 105); *i samoho lanchrafa heskoho<ACC/GEN\_m\_anim>, švakhera krolevskoho, čerezъ Žekhockoho starostu babimostskoho<čerezъ-PP> zabito<NTF\_pf> (1720, *Skazanije o vojně kozackoj z poljakami*, 128). Žovtobryuch (1980) finally observes that the agent expressed in the instrumental oblique seems to have been in the process of decay in the course of the Middle period, even though it had never become completely obsolete (288).****

In contrast, Slyn'ko (1973) claims that agent expressions in the form of instrumental oblique have been attested already in the 15<sup>th</sup> c., and were growing in productivity toward the 16<sup>th</sup> c. The shape and distribution of agent expressions apparently changes toward the end of the Middle period in favor of instrumental: in official documents of the 17<sup>th</sup> and 18<sup>th</sup> c. the instrumental agent is more frequent than agent expressions in prepositional phrases (155). Further, Slyn'ko (1973) describes ot-PP on participles like *poslanyj<PPP\_pf>* and *danyj<PPP\_pf>* as ambiguous, arguing that such ot-PPs refer to the initiator or instigator of the action, but not to

its performer (192). Besides, Slyn'ko (1973) claims that Middle Ukrainian z-PP has been borrowed from the Polish reflexive passive construction, cf. *rodić się z kogo*, and used to have a transitive status in Middle Ukrainian syntax, till it was finally replaced by ot-PP (195). The co-occurring čerez"-PP and prez"-PP, encountered in Middle Ukrainian texts parallel to instrumental agents, were initially not frequently employed. Such prepositional phrases designating the doer of the action were first attested in official documents of the 15<sup>th</sup> c. The 16<sup>th</sup> c. witnesses the growing productivity of both instrumental and prepositional phrases with „čerez“ and „prez“ designating performers. Slyn'ko (1973) reports that the čerez"-PP actually exceeds the instrumental agent phrases in number in several of the 16<sup>th</sup> c. file records. Such predominance of PPs is especially obvious in polemical texts of the 16<sup>th</sup> and early 17<sup>th</sup> c. Slyn'ko (1973) suggests after Staniševa (1958) that a čerez"-PP in place of instrumental agent in (Great) Russian was first attested in mid-17<sup>th</sup> c., while in Ukrainian it already occurred as early as in the 15<sup>th</sup> c. Slyn'ko (1973) further mentions that čerez"-PP outnumbers the instrumental agent in Ukrainian since the 16<sup>th</sup> c., especially in works influenced by the Polish literary tradition, that reflected the affinity of Ukrainian vernacular toward a čerez"-PP (153-155).

In the same vein, Moser (1998) concludes that, in contrast to Common Eastern Slavonic and Middle Russian, čerez-PP and prez-PP are frequent in Middle Ukrainian and Middle Belorussian, assuming after Bulachovs'kyj (1977) that prez-PP has been borrowed from Polish (249-250). In Middle Ukrainian texts čerez-PP frequently occurs to designate an agent, which Moser (1998) holds to be a syntactic borrowing from Polish as well. Moreover, not only agentive, but also instrumental čerez-PP and prez-PP have genetic ties to their Polish counterpart przez-PP (251). Moser (1998) further observes that both agentive przez-PP and instrumental przez-PP designating a tool have often been attested in Old and Middle Polish as well (citing Klemensiewicz 1955, 430; Pisarkowa 1984, 88). Also Bulachovs'kyj (1977) interprets all instances of čerez-PP and prez-PP in Middle Ukrainian as an imitation of its Polish cognate – the agentive przez-PP (567). The prez-PP, however, being a redundant dublet of a čerez-PP, apparently went into oblivion already in Middle Ukrainian period (562).

According to Filin (1971) ot-PP is a typical Church Slavonic agent expression, that has a bookish flavor if used in Eastern Slavonic vernacular. The agent expressed with the instrumental case is a Common Old Slavonic phenomenon seldom used in the structure of *-no*, *-to* predicates. The instrumental agent is hardly ever attested in Ukrainian dialects, but is apparently well represented in Belorussian ones<sup>70</sup> (285). Bulachovs'kyj (1977) restricts the ot-

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70 Such a high frequency of instrumental agent in Belorussian is, to our knowledge, otherwise unreported in

PP on passivoid phenomena in Old Ukrainian to the syntactic peculiarities of the bookish style. The prepositional agent phrase expressed with „ot“ and genitive is apparently borrowed from Church Slavonic, and is reflecting both Greek and Latin syntax through Polish mediation (568). According to Arpolenko (1983) ot-PP in agreeing passives is more frequent than instrumental agent, the instrumental case commonly designating the tool in Middle Ukrainian (278). The subject in *-no*, *-to* predicates historically can be expressed in the ot-PP and in the *čerez"/(prez)-PP*. Besides, the agent in the structure of *-no*, *-to* forms can apparently also be expressed with dative (282).

Fici Giusti (1994, 122) claims to have detected an u-PP in the structure of Middle Ukrainian *-no*, *-to* predicates, that is an agent expressed with „u“ plus genitive, similar to the agentive adjuncts of a possessive perfect construction indicating the performer of the action in North Russian dialects, cf. *Pisano*<NTF\_impf> *listo*<ACC\_n> *ou*<in> *Luckou*<Luc'k> (citing Bajmut 1957, 199). On the closer examination however it becomes obvious that there must be a misinterpretation, since the u-PP in the ex above is clearly non-agentive, neither there can be a semi-agentive reading of a mediator of the action or the tool. The u-PP in this ex bears a locative/adessive interpretation, in the sense of a location or a place. Thus Fici Giusti's Italian translation „Luckij scrisse la lettera“ [Luckij wrote a letter] does not sustain. The Bajmut's ex should be translated as „The letter was written in (the town of) Luc'k“. Moreover, an identical ex with adequate translation and interpretation has already been treated in detail in Shevelov (1969), who discarded this 1388 ex as a *-no*, *-to* ex on the ground of the usage of *o* in function of *o*, which has been attested in several charters of the period (176).

Polish seems to have allowed for more syntactic variation with respect to oblique agent expressions diachronically than synchronically. Historically, beside *przez-PP*, which came to be the standard agent expression in modern Polish, the instrumental case and *od-PP* have also been employed to designate the performer of the action, cf. mid-15<sup>th</sup> c. exx from *Rozmyślanie przemyskie* and the Bible of Queen Sophia: *to wszystko tobą*<INST> *jest*<AUX\_pres> *stworzono*<NTF\_pf> (Kempf 1978, 125); *oferowano*<NTF> *było wami*<INST>; *coż jest ustawiono*<NTF> *mną*<INST>; *widząc, iż panem Bogiem*<INST> *takie działa uczyniono*<NTF>; *śniedziono*<NTF> *od zwierza*<od-PP> (Kempf 1978, 96). The instrumental agent expression and *od(t)-PP* have also been attested in agreeing participles, cf. *lud izraelski obronion*<PPP> *będzie Bogiem*<INST> *swym*; *ot pana Boga*<ot-PP> *jeś ustawion*<PPP> (Kempf 1978, 96). Related agent expressions occur in the later centuries as well, cf. an ex from the year 1561: *Elizabeth Margarethe mater ojcem*<INST> *wydana*<PPP> (Kempf 1978, 124); the 17<sup>th</sup> c. ex *Przyznam się że by mi ciężką musiała*

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literature.

*przynieść konfuzyią na mnie prostaka włożona<PPP> od Officera<od-PP> mego Prowincyia* (SŁOWNIK JEZYKA JANA CHRZYSTOMA PASKA. TOM II, O-Ż, 1973, 26).

Doros (1975) claims that the acting person in the structure of *-no*, *-to* predicates in both Old Polish and Old Russian could be expressed either in the instrumental oblique or in the prepositional phrase with „ot“ plus genitive. Doros (1975) further observes that in contrast to Old Russian that frequently employed the instrumental agent to express the external argument in passivoid phenomena, the leading mean of expressing the agent in Old Polish was the *ot-PP*, that was employed considerably more often than the instrumental, e.g. *by thesz krolesthwo tho nakonyecz abo skazono od nyeprzyaczol<od-PP>, abo posyandyono od poganow<od-PP> nyebylo; lepiey od krzescyanow<od-PP> nie ma być chwalona* (92). The *ot-PP* in Polish was still productive in the second half of the 18<sup>th</sup> c. (93). Österreicher (1926) observes that the instrumental agent expression was actually the only means of expressing the performer of the action in the oldest Polish texts. Still it was not productive and was at decline already in the early records (50). Discussing the early Polish writings, Doros (1975) comments that infrequently the prepositional phrase with „przez“ was also employed to designate the agent, e.g. *A tedy rącz gest (cy) giim tho bilo pres<przez-PP> swątego angola tako othpuedzano; Wyrażono w Krakowie przez<przez-PP> Florianą Bawara*. Doros (1975) describes *przez-PP* as a „very old“ agent expression, since it was already attested in early 1400s (93).

Discussing agent expressions in the 15<sup>th</sup> and 16<sup>th</sup> c. Bible translations, Kowalska (1991) remarks that they are rare in both texts. Kowalska (1991) is quoting several agents in the instrumental oblique and in prepositional phrases, e.g. *bo przekłęt Bogiem<INST> jest wszelki, któż wisi na drzewie* (15<sup>th</sup> c.) vs. *Bo przeklęty od Boga<od-PP> jest, który wisi na drzewie* (16<sup>th</sup> c.); *ale ty od Pana Boga<od-PP> twego inako jeś ustawion* (15<sup>th</sup> c.) vs. *ty zasię inaczej jesteś od Pana Boga<od-PP> twego nauczony* (16<sup>th</sup> c.); *nalezion będzie a zabity byłby od tego<od-PP>; jenże mściciel jest krwie* (15<sup>th</sup> c.) vs. *będzie naleziony i zabity od tego<od-PP>, który się mści krwie* (16<sup>th</sup>) (102). Kowalska (1991) further observes that the agents in both Bible translations are usually expressed in the prepositional phrase „od“ plus genitive, e.g. *Ale ofiarowano jest od tych<od-PP>, którzy szli w liczbę* (15<sup>th</sup> c.) vs. *A ofiarowano było od tych<od-PP>, którzy szli w poczet* (16<sup>th</sup> c.); *bo jest to prawo dziewczek Salfaad od Boga<od-PP> wydano* (15<sup>th</sup> c.) vs. *I to prawo o córkach Salfaad od Pana<od-PP> jest wydane* (16<sup>th</sup> c.). There is one record of the agent phrase expressed in the bare instrumental that was later rendered in the prepositional phrase with „przez“ plus genitive, i.e. *aby ofiarowano było wami<INST>* (15<sup>th</sup> c.) vs. *aby było ofiarowano przez was<przez-PP>* (16<sup>th</sup> c.) (104).

### 3.2.4. Predicate type in *-no*, *-to* and in periphrastic/participial passives

Nedashkivska Adams (1998) observes that in contrast to Polish *-no*, *-to* that can equally attach to both perfective and imperfective verb stems, the rules for the formation of the *-no*, *-to* predicates in modern Ukrainian are not clearly cut. She mentions that „extensive debate continues concerning the non-agreeing *-no/-to* constructions which, in Ukrainian, are formed almost exclusively from perfective verbs“<sup>71</sup> (189). Her observation is confirmed by the majority of accounts on modern Ukrainian *-no*, *-to*. Wieczorek (1994) e.g. mentions that *-no*, *-to* predicates formed from imperfective stems sound archaic in modern Ukrainian, while in modern Polish *-no*, *-to* attached to imperfective stems do not produce such an effect (17). Likewise, Jedlins'ka (1961) observes that the majority of *-no*, *-to* predicates in contemporary Ukrainian are formed from perfective verbs, while those formed from imperfectives are reminiscent of Polish *-no*, *-to* structures (41). Similarly, Bulachovs'kyj (1977) mentions that non-iterative imperfective *-no*, *-to* forms make an impression of being Polonisms (484). Shevelov (1963) reports that in more recent times *-no*, *-to* predicates formed from imperfective stems are rarely found (140). Leonova (1983) mentions that participial forms in *-no*, *-to* are usually formed from perfective verbs (178).

As to the transitivity split, Pugh and Press (1999/2005) observe in their text book, that *-no*, *-to* forms in modern Ukrainian are formed exclusively from transitive verb stems. Contrary to other Slavonic languages, the *-no*, *-to* forms, that are interpreted in this text book as regular passive past participles, can be formed from both perfectives, that is from verbal formations referring to an action that has been completed, and imperfectives, that is from forms that refer to an ongoing or lasting action in the past, „although perfective formations are in practice far more common“ (250). Pljušč (2009) however claims that synchronic *-no*, *-to* forms are only formed from transitive<sup>72</sup> verbs and are of both perfective and imperfective aspect (293). According to Cilyna (2008) synchronic *-no*, *-to* forms are formed exclusively from transitive verbs (154). Bezpojasko et al (1993) reports that synchronic *-no*, *-to* forms are usually formed from transitive verbs, and very seldom from intransitive (162f). Synjavs'kyj (1941, §146) observes that predicates in *-no*, *-to* are usually formed from transitive verbs;

71 Nedashkivska Adams (1998) does not include *-no*, *-to* predicates formed from imperfective verbs in her comparative analysis of voice constructions in contemporary Ukrainian, remarking that imperfective *-no*, *-to* still need further investigation.

72 In contrast to intransitive verbs that per definition do not trigger any direct object, transitive ones require at least one direct object. Transitive objects can also require two or more arguments. Intransitive verbs can be further classified into unaccusative and unergative verbs. Unaccusative verbs are verbs whose subject is not an agent, i.e. ukr. *vmyraty* „die“. Unergative verbs are the verbs that have an agent subject, i.e. ukr. *rozmovljaty* „talk“, *bihy* „run“.

seldom also from intransitive, but only from those intransitives that denote an action performed by a living being, and only if their infinitives end in *-ty*, e.g. *zahrano*<NTF\_intr>, *pochodženo*<NTF\_intr>. In fact Petlyčnyj (1960), who has carried out a corpus-based study of transitivity split in (Western) Ukrainian *-no*, *-to*, has discovered that only 13 out of 190 *-no*, *-to* forms in works by a Western Ukrainian writer Ivan Franko (1856-1916) are derived from intransitive verbs (34). Related observation is made in Wiemer (to appear), who mentions that Ukrainian *-no*, *-to* are more restricted in their lexical input than Polish ones, i.e. atelic verbs like *pobačyty* “to look at” are hardly attested in modern Ukrainian *-no*, *-to*. Generally Wiemer (to appear) describes the *-no*, *-to* formed from intransitive verbs in Ukrainian as “unusual”; the volitional verb *bažaty* “to desire” is classified as the only exception (13).

Žovtobrjuch (1980) observes that historically *-no*, *-to* forms could be formed from both perfective and imperfective verbs, and even from iterative verb stems, i.e. *a vyti*<GEN> *žadnoe s toho ot nich ne*<NEG> *birano*<NTF\_tr\_impf\_iter> (1552); *aby do nich z dalekich storon na spravu eždženo*<NTF\_intr(unerg)\_impf> (1595); *kotorich potom napotom imano*<NTF\_tr\_impf>, *věšano*<NTF\_tr\_impf>, *stinano*<NTF\_tr\_pf> *i mordovano*<NTF\_tr\_impf>, *jako zločincov* (1595). Similarly, *-no*, *-to* forms could also be formed from both transitive and intransitive verbs. None of the *-no*, *-to* records formed from intransitive verbs cited by the author has a direct object complement in the NP, cf. *i takže khdy ei v Berestejskom khrodě do akt prinjati ne*<NEG> *chočeno*<NTF\_intr\_impf> (1598); *Časti ustupi, aby tyž tobě časti ustupiti moženo*<NTF\_intr\_impf>! (1598); *torhnenosja*<NTF\_REFL\_intr\_impf> *zaraz kljativamy* (1598) (287).

Arpolenko et al (1983) observes that past participles formed from perfective verbs represent the most frequent predicate type in Old Russian; those formed from imperfectives are less frequent (57). Arpolenko et al (1983) mentions that *-no*, *-to* predicates in Old Ukrainian could be formed not only from perfective verb stems, but also from imperfective verbs that indicate repetitive actions. Besides, *-no*, *-to* forms historically could be formed from both transitive and intransitive verb stems (279-280). Bulachovs'kyj (1948) observes that in Middle Ukrainian records the imperfective *-no*, *-to* forms that are non-iterative make an impression of being Polonisms, cf. *no i ostalnych utikačov honeno*<NTF\_impf> *i vezdi byto*<NTF\_impf> (1651).

Hansen (2010) observes that the aspect in modern Polish is generally “morphologically marked by derivational and not by inflectional devices. It is expressed by the addition of a range of prefixes or suffixes to a verbal stem” (1). There is no unified opinion as to the *-no*, *-to* properties with respect to aspect, passivization and intransitivity split in Polish. On the one hand it is claimed that synchronic impersonal *-no*, *-to* forms can be



attached to passivized transitive predicates, cf. *Zostano*<NTF\_become> *ukaranym* (Rudnicka-Mosiadz 2000, 5); and that even the auxiliary verb „be“ undergoes *-no, -to*, e.g. *Często bywano*<NTF\_iter> *w Warszawie* (Kibort 2004, 258); *Dostawano różne kary i bywano*<NTF\_be> *bitymi* (Kibort 2004, 260). On the other hand Četnarowska (2000) observes that *-no, -to* forms generally do not admit passives and unaccusatives, mentioning however that *-no, -to* can attach to unaccusative verb stems, if “...they denote iterative or habitual eventualities“, i.e. *Umierano*<NTF\_die> *z głodu i wycieńczenia* (cited in Rudnicka-Mosiadz 2000, 5). Krzek (2010) likewise observes that the occurrence of unaccusative verbs in *-no, -to* predicates is restricted to iterative imperfectives, classifying the following exx as acceptable: *umierano*<NTF\_died\_iter>, *upadano*<NTF\_fell\_iter>, *dojrzewano*<NTF\_ripened\_iter>, while the same exx formed from perfective verbs are ungrammatical, i.e. *\*umarto*<NTF\_died\_pf>, *\*upadnięto*<NTF\_fell\_pf>, *\*dojrzano*<NTF\_ripened\_pf> (1). In similar vein, Lavine (2005) observes after Četnarowska (2000) that the formation from unaccusative verb stems is not entirely productive in *-no, -to* predicates, since it is limited to imperfective predicates with an iterative interpretation. Lavine (2005) relates such a constraint to the generic nature of the PRO<sub>arb</sub> subject of the synchronic Polish *-no, -to* clauses (10). Note that Kibort (2004) has actually shown that in modern Polish it is in fact possible to employ non-iterative and non-habitual unaccusative perfective predicates in the formation of accusative assigning *-no, -to* structures, i.e. *Zadrżano*<NTF\_tremble> *na wieść o niechybnej wojnie*. Kibort (2004) further introduces an ex with *-no, -to* attached to the emotion-verb *odczuć* “feel”, i.e. *Dopiero w 1988 roku odczuto*<NTF\_feel> *ponownie potrzebę odtworzenia Towarzystwa Przyjaciół “Ossolineum”* (259).

Rozwadowska (1992)<sup>73</sup> observes that, similar to impersonal reflexives, *-no, -to* predicates in modern Polish admit agentive transitive verbs, cf. *Zwalczano*<NTF\_fight> *nielegalne organizacje*; subject experiencer transitive verbs, e.g. *Nienawidzono*<NTF\_hate> *oszustów*; standard unaccusative verbs, that is intransitive verbs with both agentive and non-agentive human subjects, i.e. *Leżano*<NTF\_lie> *na tapczanie*; *Umierano*<NTF\_die> *niespodziewanie*; reflexive verbs, i.e. *Spozniano*<NTF\_come\_late> *się na zajęcia*; *Wstydzono*<NTF\_shame> *się swoich błędów*; object experiencer verbs, if their external argument is an agent, i.e. *Zaskoczono*<NTF\_surprise> *mnie nagle*

<sup>73</sup> Rozwadowska (1992) discusses impersonal constructions in *-no, -to* parallel to Polish derived reflexives, arguing that even though they are structurally different, the two structures exhibit the same syntactic constraints: they cannot occur with surface subject arguments in the structure, but can co-occur with structural accusative; both express the action in an impersonal way. The difference is that *-no, -to* in Polish are restricted to the past and can themselves operate on verbs which are reflexive (52-53). Also Siewirska (1988) observes that Polish *-no, -to* clauses display characteristics similar to indefinite active reflexive constructions. In contrast the Russian *-no, -to* participle clauses are qualified as passive (279-280). Franks (1995) in his chapter over voice alteration (8) investigates voice altering morphemes in Slavonic languages, observing that participial and passive morphemes are in some instances able to function either as lexical word-formatives or as syntactic arguments.

*wizytą*; as well as unergative verbs, i.e. *Spacerowano*<sub><NTF\_walk></sub> (62-64). Kipka (1989) however mentions that the unergative *iść* „to go“, and its prefixed cognates *zejść* „to descend“ and *przyjść* „to come“, as well as the verb *biec* „to run“ cannot undergo *-no*, *-to* in modern Polish (138), which is i.a. in line with Burzio's (1986) observation that unaccusatives are not capable to participate in formation of passive impersonals, since they are lexically defined as not capable of assigning structural accusative. One of the earliest accounts, Krasnowolski (1909) observes that *-no*, *-to* forms accept all verbs but two – the verb *iść* „to go“ and the verb *móc* „can/be able to“ do not undergo *-no*, *-to* formation in Polish (24).

Discussing the formation of *-no*, *-to* predicates from intransitive verbs, Rozwadowska (1992) observes after Wolińska (1978, 67) that not all intransitives readily undergo *-no*, *-to*. Since *-no*, *-to* in modern Polish are lexically restricted to human interpretation, the construction does not admit verbs that designate actions and processes that exclude human reading. Wolińska (1978) observes that *-no*, *-to* predicates in modern Polish can be formed from a great number of verbs, alluding to Doros (1975, 106), who argued that *-no*, *-to* forms can be formed from „almost“ every single verb stem, whether it is perfective or imperfective, transitive or intransitive. Wolińska (1978) sets out to determine the restriction that the word „almost“ signalizes, observing that even though the possibility of *-no*, *-to* formation is greater than that of regular passive participles, not all intransitives are capable of undergoing *-no*, *-to* formation. Wolińska (1978) observes, i.a. after Tokarski (1973) that since *-no*, *-to* are semantically restricted to human actions, they cannot be formed from verbs that designate actions and states carried out without a human participation (67). Thus *-no*, *-to* in modern Polish cannot be formed from the verbs whose implied subject is not human, e.g. *ciec* „leak“, *ćwierkać* „chirp“, *frunąć* „fly up“, *kipieć* „boil“, *miauczeć* „meow“, *obowiązywać* „become effective“, *pęcznieć* „swell“, *stygnać* „cool“. Excluded are also certain verbs that refer to the process of obtaining a human quality and end in *-(n)eć*, e.g. *apatycznieć* „get apathetic“, *blednąć* „grow pale“, *biednić* „become poor“, *brzydnąć* „become ugly“, *chicnąć* „grow calm“, *gluchnąć* „grow deaf“, *hardzieć* „grow insensible“, *mizernieć* „grow weak“, *niedoleźnieć* „grow infirm“, *przytomnieć* „regain consciousness“, *siwieć* „to turn grey“, *słabnąć* „grow weaker“, *ślepnąć* „grow blind“, *tetryczeć* „grow grouchy (with age)“ (67); verbs designating activities of selected individuals, inaccessible to wider groups do not participate in *-no*, *-to* formation either, e.g., *abdykować* „abdicate“, *atamanić* „be ataman“, *burmistrzować* „be mayor“, *hetmanić* „be hetman“, *królować* „reign“, *pretendować* „claim“ (68). Wolińska (1978) also excludes verbs that she describes as semantically obscure, namely *biec* „run“, *lec* „lie down“, *móc* „can“, *polec* „die“, *pomóc* „help“, *uciec* „escape“, *być* „be“, *zostać* „become“,

woleć „prefer“, drzeć „tear“, umrzeć „die“, pragnąć „desire“, rosnać „grow“, tonąć „drown“. The formation *-no*, *-to* from iterative verbs is described by Wolińska (1978) as acceptable, cf. *biegano*, *pomagano*, *uciekano*, *dochodzono*, *zostawano*, *umierano*. Wolińska (1978) concludes that the essential requirement for a verb to undergo the *-no*, *-to* formation is the agentivity of the acting person (68).

Doros (1975) observes, i.a. after Kałkowska (1973) that at least till the 17<sup>th</sup> c. *-no*, *-to* forms in Old Polish were rarely formed from intransitive verb stems, listing several exx, e.g. *A mleko vbogiemu ma być pożądan<NTF\_intr>*; *U tego stołu jadano<NTF\_intr>*, *a ptak siedział nie bał się*; *Ksiądz z bólu i z przestachu zemdlął, ledwie się do dotrzeźwiono<NTF\_intr>*. There are hardly any *-no*, *-to* formed from intransitive verbs in Kałkowska's (1991) Old Polish corpus consisting of 200 *-no*, *-to* records collected from the texts written before 1600. Doros (1975) observes that formation from intransitives in Polish *-no*, *-to*, similar to their Russian cognates, becomes productive only in later centuries (91-92). In contrast to Old Russian, in Old Polish *-no*, *-to* formed from imperfective stems were as widespread as those formed from perfective stems, cf. *Theszs gdziekolye plugem w ogrodzech albo na polyoch oranobi<NTF\_impf> bilo*, *dzeszanczina spelna ma dana bicz*; *W tym że Klasztorze byla [...] szostra [...], która dlya tego chowano<NTF\_impf> tak dlugo*, *yszby [...] byla wybawyona*; *W nocy chłopą goniono<NTF\_impf>*; *Częściej iednak Tatarów gromiono<NTF\_impf> w Koronie*. Apparently there was no lexical restriction on the formation of *-no*, *-to* predicates from imperfective transitives in Polish historically (92).

Kowalska (1991) observes that in the 15<sup>th</sup> c. Bible of Queen Sophia the *-no*, *-to* predicates that occur without overt tense marking auxiliaries are formed from perfective verbs, the only exception being the imperfective verb *dziać* that *-no*, *-to* accept in addition to perfectives. Kowalska (1991) interprets the form *dziano* as a shortened variant of the phrase *dziano jest mu imię*, quoting the exx below to support her claim, e.g. *Starszej dziano<NTF\_impf> Lia*; *A drugiej dziano<NTF\_impf> Kolibama*; *jejże otcu dziano<NTF\_impf> Eweheus*; *a Jakob przyszedł na to miasto, jemuż dziano<NTF\_impf> Sochot*; *jednemu dziano<NTF\_impf> Gerson* (102-103). Kowalska (1991) further observes that in the 16<sup>th</sup> c. Bible translation made by Wujk the *-no*, *-to* forms, that are generally more frequent than in the 15<sup>th</sup> c. Bible translation, are formed from both perfective and imperfective verb stems. Out of 57 *-no*, *-to* forms attested in the 16<sup>th</sup> c. Wujk Bible, 36 are formed from perfectives, 21 from imperfectives.

### 3.2.5. Lexical and morphological content of the NP of *-no*, *-to*

The default agreement<sup>74</sup> in *-no*, *-to* has been attested in all Eastern Slavonic languages both synchronically and diachronically: it is one of the key notions in the formation of *-no*, *-to*, whether with nominative or with accusative as object case. The agreement in *-no*, *-to* is sometimes described as the corrupt agreement, disrupted agreement or simply as non-agreement in literature. While in modern Ukrainian and Polish, but crucially not in modern Russian, there is a clear distinction between true neuter singular agreement in *-e* and a neutral or default agreement in *-o*, such distinction was not yet consistently in tact – if at all available – in Middle Ukrainian.

Corbett (1979) describes the predicate agreement with quantified subjects as “one of the most complex, confusing and potentially most rewarding areas of Russian syntax” (57). This area of syntax seems to be intricate in modern Ukrainian as well: it is not altogether clear whether *-no*, *-to* forms with a quantified expression or a numerical phrase in the NP can be transformed in binominal clauses with plural agreement. Matvijenko (1936) suggests that passive structures in which the underlying object is a numerical phrase can trigger both *-no*, *-to* and plural agreeing participles (43). Still, the numerous exx in Wieczorek (1994) with a quantified underlying object in the NP actually all trigger *-no*, *-to* predicates<sup>75</sup>. Moreover, Billings and Maling (1995, 86) argue that synchronically “it is impossible for any of the preceding quantified NPs to have any predicate form other than *-no*, *-to*”, explaining that “whether or not the quantified NP is in sentential subject position, there is nonetheless no NP (headed by a morphologically nom[inative] noun) for the predicate to agree with...” On the ground of such properties, Billings and Maling (1995) further suggest that *-no*, *-to* form “indicates either a pleonastic subject (or no subject per Babby 1989) or a subject lacking features necessary to trigger predicate agreement” (86-87).

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74 Corbett (1979) observes that there are several universal factors that favor a default predicate agreement. Provided alternative agreements are allowed, the increasing syntactic distance favors a loose syntactic agreement. An agreeing element which precedes its controller is nearer to it than an agreeing element which follows it. Thus, predicate-subject order favors a strict agreement, while the reverse order favors a loose agreement (81). The further it is from the subject NP, the more likely is a plural agreement (82). Finally, animate nouns favor plural, loose or semantic agreement (83).

75 Some of Wieczorek's (1994) exx are below: *Stvoreno kil'ka soten firm...* (22); *Simdesjat vidsothiv materialu vidredahovano...* (23); *Skil'ky pisen' pohubleno teper...* (22); *zibrano sotni svidčen' ljudej...* (50); *Skil'ky dijsnych vypadkiv, i kazok, i kryvavych lehend bulo rozkazano tijeji noči* (54); *Opytano 33 informatory, zapysano bil'sh sta receptiv za zamovlen'* (56); *Ponad sorok imen ukrajinok časiv Kyjivs'koji Rusi zolotymy literamy vykarbuvano na skryžaljach istoriji* (75); *Dekil'ka nastupnych rokiv žyttja Petra Sahajdačného prychovano vid nas pelenuju času* (76); *Des' u zapysnyku zanotovano odyn telefončyk* (81); *ponad pivtora metra porožn'oji kišky z'jideni hanhrenoju* (85); *Pro lavrs'ki pečerny uže v danynnu bulo stvoreno bezlič lehend* (99).

The numerical phrase in the NP is known to have triggered default agreement in *-no*, *-to* historically. Karskij (1962) in his comments on the syntax of Laurentian Codex<sup>76</sup> (1377) that, despite its numerous Church Slavonic elements, fundamentally reflects the typical features of Old Eastern Slavonic, mentions that the numerals 5 to 10 in this Codex are declined as collective nouns. These noun-like numerals naturally triggered default agreement in *-no*, *-to*. At the same time participles [*pričastie*] that were in the process of losing their declensional paradigms, changing into adverbial gerunds [*dejepričastie*], also triggered the default agreement, or the non-agreement as to the gender. Karskij (1962) concludes that nouns describing collective entities (in plural or singular) in Old Eastern Slavonic can trigger both plural and neuter singular, or default agreement (54ff), i.e. *Hospodi tvoimъ promyslom zvěr'je*<sub><coll></sub> *raznoličnii i ptica*<sub><NOM\_a-decl></sub> *i ryby*<sub><NOM/ACC\_pl></sub> *oukrašeno*<sub><NTF></sub> (62). There are also historical records with the collective noun in the NP that trigger the plural marking on its predicate, i.e. in the ex below the auxiliary triggers plural agreement, while the participle triggers singular agreement, cf. *ašče kneže bratije naša isěčena*<sub><PPP\_sg></sub> *sut'*<sub><AUX\_pl></sub> (Laurentian Codex; cited in Borkovskij 1963, 327, fn). Related observation on the use of collective nouns and loose agreement in the first half of the 16<sup>th</sup> c. is made by Unbegaun (1935), who has shown, that morphologically singular but syntactically plural collective nouns like *rus'*, *litva*, *mordva* trigger plural agreement, cf. *ino u litvy togo obyčaa nět", čtoby kogo pojmov" da pustili*<sub><3pers\_pl></sub> (270). Besides, in plural environments the singular inanimate nouns were matched by corresponding collective nouns that automatically triggered agreement in *-o*, cf. *a kotoroe derev'e pisano*<sub><NTF></sub> (300).

The genitive case in general, and the genitive of negation in particular have already been discussed as factors that might have played a role in the establishment of both Polish and Ukrainian accusative assigning *-no*, *-to* predicates, cf. the elegant hypothesis of Mel'nyčuk (1966) and Shevelov (1968). Besides, construction's compatibility, or non-compatibility with the genitive of negation can give us some clue as to the *-no*, *-to* status historically, since this case alternation is a robust diagnostics for unaccusativity. That is, if a construction readily undergoes the genitive of negation, it would speak for its non-passive status (cf. Maling 1993; cited in Billings and Maling 1995, 41-42).

In modern Ukrainian partitive genitive of nouns denoting divisible substances may be used as the object of perfective verbs to indicate an indefinite quantity of something. Similar to direct objects under sentential negation that synchronically can appear in both genitive and

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<sup>76</sup> Laurentian Codex is a collection of several chronicles depicting events in Northern Russia. It includes the oldest version of the Primary Chronicle.

accusative, partitive genitive in modern Ukrainian can be substituted for structural accusative<sup>77</sup>. The modern *-no*, *-to* in their relation to genitive of negation have already been scrutinized: discussing the syntax of accusative case in modern Ukrainian Vyxovanec' (1971) observes that the genitive of negation is „becoming less and less prevalent in Ukr[ainian] literary works“ (10) (cited in Billings and Maling 1995, 78). Wieczorek (1994, 41) remarks that in sharp contrast to modern Polish, modern Ukrainian allows direct objects under sentential negation appear both in genitive and in accusative. Citing Vychovanec' (1971, 10), Wieczorek further emphasizes the growing productivity of accusative marking under sentential negation in modern Ukrainian (41), listing several exx in support of the decline of genitive of negation in Ukrainian *-no*, *-to* predicates, e.g. *Cju nevelyčku knyžečku*<sub><ACC\_a-decl></sub> *ne*<sub><NEG></sub> *bulo*<sub><AUX></sub> *obijdeno*<sub><NTF></sub> (41); *Ale ž pracju*<sub><ACC\_a-decl></sub> *ne*<sub><NEG></sub> *zaveršeno*<sub><NTF></sub> (56). The apparent decline of genitive of negation in *-no*, *-to* would tie in with the Maling's (1993) take on the modern Ukrainian *-no*, *-to* as passive predicates, and her observation that the genitive of negation on underlying object is a property of un-passive predicates (cf. Billings and Maling 1995, 42)<sup>78</sup>.

Another criteria connected to the genitive vs. accusative marking on the direct object complement of *-no*, *-to*, is the animacy of the underlying object. In modern Ukrainian *-no*, *-to* forms traditionally admit morphological genitive marking on the direct object complement in place of accusative, i.e. *lysta*<sub><GEN></sub> *napysano*<sub><NTF></sub>. The masculine animate noun *lyst* „letter“ in this ex is only morphologically, but not syntactically, equal to genitive. This phenomenon is described by Billings and Maling (1995) as “grammatically animate but semantically inanimate”<sup>79</sup>. That is inanimate nouns of this declensional class take the morphological genitive to express the syntactic accusative case (79, fn). In similar vein, Corbett (1979) remarks that masculine and plural animate nouns in modern Russian take an accusative which is identical in its form to the genitive (61).

According to Kuz'mina and Nemčenko (1964), several modern North Russian dialects

77 Humesky (1980) observes that the partitive genitive is used to designate an indefinite quantity of something, i.e. *Ja choču kavy* „I'd like some coffee“ (164). The partitive genitive in modern Ukrainian is obligatory after quantitative expressions like *trochy* „a little“, *malo* „little“, *bahato* „much“ (164). Otherwise genitive can alternate with accusative retaining the meaning of indefinite, usually small quantity of something, i.e. the imperfective equivalents of the verb like *kupyty* „buy“, *uzjaty* „take“, *z'jisty* „eat“ usually take an accusative structural case instead of genitive, while *jisty* „eat“ and *pyty* „drink“ must take accusative (164). The quantified modifiers in the NP in modern Ukrainian are treated as neuter nouns, triggering the 3<sup>rd</sup> person singular neuter agreement in *-ne*, *-te*, since they are construed as grammatical subjects (165).

78 The discussion however does not give any clue as to whether the loss of the genitive of negation in *-no*, *-to* predicates is somewhat correlated with tense marking auxiliaries; neither is it clear whether it precedes at the same pace in other transitive clauses of contemporary Ukrainian.

79 Related anomalies have been reported by Timberlake (1974): animate feminine singular nouns in North Russian, such as *zena*, *Orina*, *docer'*, *doci*, or *mati* are semantically animate, but grammatically inanimate, inasmuch as they do not undergo the animate accusative rule (69).

with the nominative object rule have not extended the animate accusative rule to plural animate nouns; these dialects still employ the old accusative-nominative form instead of accusative-genitive form typical of the codified Russian and most Russian dialects (167). Timberlake (1974) observes that the old accusative-nominative in North Russian occurs in syntactic environments that are not appropriate for the nominative object, cf. *ždala syny*<ACC/NOM\_pl\_anim>. These old accusative-nominative forms in place of genitive<sup>80</sup> occur, according to Gröschel (1972), in modern Ukrainian literary language as well, but only with domestic animals in the NP, i.e. old accusative-nominative forms *voly, koni, vivci* might appear instead of standard genitive forms of modern Ukrainian *voliv, konej, oveć* (126). Moreover, discussing accusative-nominative forms in Ukrainian dialects, especially those of the South-West, Bevzenko (1960) observes that they still occur with all kinds of animate plurals in the NP, including human beings (89).

Jung (2010) observes that only masculine animate nouns were grammatically animate in Old Russian. Around the 16<sup>th</sup> c., the category of animacy is believed to have extended to feminine plural nouns (382). Likewise, Timberlake (1974) observes that in the 14<sup>th</sup> and 15<sup>th</sup> c. the animate accusative rule included solely masculine animate plural nouns, but it was extended to feminine animate plural nouns from the 16<sup>th</sup> c. on. Timberlake (1974) remarks that since the extension of the innovative animate accusative rule was a gradual and ongoing process in Old Russian, it is at times impossible to interpret animate plurals unambiguously (64).

Gröschel (1972) observes that the genitive plural with animate NPs in the function of structural accusative is attested in Eastern Slavonic already in the 14<sup>th</sup> c. Belorussian and Ukrainian historically have been more conservative in relation to innovative genitive in place of accusative than Russian. In the 16<sup>th</sup> c. Belorussian texts the old accusative-nominative forms seem to prevail. The same is true for the Ukrainian, since in the 14<sup>th</sup> and 15<sup>th</sup> c. Ukrainian charters Dem'jancuk has found only 3 exx of genitive plural in place of structural accusative, all of them with human head nouns. In the 16<sup>th</sup> c. Ukrainian, the genitive forms in the function of accusative occur with human head nouns as well, while the old accusative-nominative forms are attested with animal NPs. The number of genitive forms to express structural accusative has grown considerably in the Middle period. For instance, in the works

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80 Timberlake (1974) observes that animate nouns and pronouns that have equal accusative and genitive forms represent the only morphological class that is not subject to the nominative object rule in North Russian (66). The exclusion of these nouns and pronouns from the rule might be motivated by the fact that they are grammatically animate (71). If agreement is interpreted as „a kind of watershed between syntactic and morphological rules, the nominative object rule may be characterized as a syntactic rule of case specification and the animate accusative as a morphological rule of desinence substitution“ (74).

of Ivan Vyšens'kyj, a famous 16<sup>th</sup> and early 17<sup>th</sup> c. polemist, accusative-genitive forms in the function of structural accusative clearly prevail, while the old accusative-nominative forms only occur with animal NPs. The further extension of genitive in the function of structural accusative and its expansion in animal NPs continues well into the 18<sup>th</sup> c. in Ukrainian (125-126)<sup>81</sup>.

### 3.3. Summary

Slavonic *-no*, *-to* can apparently be traced back to the Indo-European impersonal structures with a predicate in agreement with a 3<sup>rd</sup> person singular. Although in the later history of the languages they tend to be restricted to the passive use, *-no*, *-to* might have originated as a voice-neutral affix. It is believed that Common Slavonic had two participial endings: the nominal short one and the pronominal long one. Historically in Polish and Ukrainian short forms were gradually eliminated, except for neuter *-no*, *-to* forms that were then employed as predicates. The establishment of accusative assigning *-no*, *-to* have been explained in two ways: either passive *-no*, *-to* have been re-interpreted into finite verbs due to the emergence of the direct object complement in their structure, or the syncretic nominative-accusative reading of the neuter nouns triggered the re-analysis of a two-member *-no*, *-to* structure into the impersonal one. It is suggested that Polish *-no*, *-to* predicates begin to function as active finite verbs with morphological accusative after the disappearance of the copula from their structure in the 17<sup>th</sup> c. The presence of structures with ambiguous either-active-or-passive reading apparently fueled the transformation of passive *-no*, *-to* into active predicates. Still, there are accounts claiming that it was *-no*, *-to* forms headed by numerical phrases that gave rise to the *-no*, *-to* forms headed by nouns of different declensional classes, with tense marking auxiliaries apparently not playing any significant role in this process.

Often it is claimed that *-no*, *-to* forms with accusative case marking are alien to (Old and Middle) Russian, since the overwhelming majority of *-no*, *-to* predicates attested are headed by NPs syncretic between nominative and accusative. The *-no*, *-to* forms with morphological accusative in such accounts are interpreted as isolated instances of Belorussian and Ukrainian. The Ukrainian accusative assigning *-no*, *-to* is often interpreted as a syntactic

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81 Likewise, Filin (2006) observes that the substitution of old accusative for genitive in Ukrainian began later than in Russian, run slowly and has not been finished up to now. Even in the 17<sup>th</sup> c. the old accusative-nominative with animate plurals is still a rule in Ukrainian (403). Nowadays it is typical of Western and Southern Ukrainian dialects. In case of animate nouns like birds and animals, the old accusative-nominative and accusative-genitive forms co-exist. In today's Belorussian the old accusative form occurs exclusively in Southern dialects (401-404).



borrowing from Polish. Polish influence however is not always mentioned in connection to the establishment of *-no*, *-to* with structural accusative in Middle Ukrainian – several accounts suggest that the accusative assigning *-no*, *-to* in Polish and Ukrainian were established independently. Such accounts claim that accusative assigning *-no*, *-to* was inherited from Proto-Slavonic and was typical of various Eastern Slavonic dialects. Because of their vernacular character, numerous *-no*, *-to* with structural accusative were apparently deliberately and consistently eliminated by later scribes, which speaks for language policy as an important factor in the history of this construction.

It is not clear whether agreeing passives and *-no*, *-to* predicates are in free alternations in modern Ukrainian. There are accounts reporting that in modern Ukrainian *-no*, *-to* are currently acquiring the status of actional, or eventive passives, while the canonical passives are increasingly becoming confined to the resultative interpretation. The choice between agreeing and non-agreeing impersonal passives apparently depends on discourse factors. In contrast to periphrastic passives in modern Ukrainian, that can only employ the auxiliary *buty*, there are two tense marking auxiliaries that can be used in periphrastic passives in modern Polish – *zostać* and *być*, the former is reported to mark the perfective meaning of the passive clause. While the Ukrainian *-no*, *-to* are envisioned as a passive structure in complementary distribution with canonical passives, contemporary Polish *-no*, *-to* are treated as finite verb forms. The existing accounts do not give any clue as to whether the Ukrainian *-no*, *-to* are envisioned as finite verb forms historically as well. Besides, there are no accounts dealing with the frequency of Ukrainian *-no*, *-to* predicates and their distribution in relation to periphrastic passives historically. The status of Polish *-no*, *-to* predicates historically is clear: the structure is envisioned as active and finite already in the 16<sup>th</sup> c.

There is a general confusion in literature as to the temporal meaning of *-no*, *-to* predicates in modern Ukrainian. Neither descriptive nor prescriptive and pedagogical literature has made a clear statement over the use of overt auxiliaries in the structure of *-no*, *-to* up to now: it has neither been standardized nor unambiguously codified by Ukrainian grammars. Frequently the accusative assigning *-no*, *-to* forms in contemporary Ukrainian are reported to render either perfective, or simple past, or even present stative reading, as well as co-occur with past copula. The structure is sometimes reported to co-occur with the past auxiliaries to designate pluperfect. In the recent accounts however the past copula *bulo* is reported to have an arbitrary character. Moreover, there are further accounts, especially those of the 1900s and 2000s, that actually ban the use of tense marking auxiliaries in *-no*, *-to* clauses. Besides, there are accounts that envision the past copula in the structure of *-no*, *-to*

predicates as an archaism, and its very presence as the result of the contamination with Russian agreeing passives. Other accounts ascribe its presence rather to the language internal factors though. It has been reported that the Russian influence is clear in setting *-no*, *-to* equal to agreeing participles that designate a state, a confusion especially typical of the 20<sup>th</sup> c. development.

The accounts on the temporal meaning and the use of tense marking auxiliaries in the structure of *-no*, *-to* historically are disperse as well. Generally there are two contradicting lines of argumentation on the status of tense marking auxiliaries in the structure of *-no*, *-to*. On group of linguists believes that the past copula was attested in the structure of *-no*, *-to* during the whole Middle period and was increasingly dropped toward the 19<sup>th</sup> and 20<sup>th</sup> c. (cf. Žovtobrjuch 1980, 287; Arpolenko 1983, 279). Another group of linguists claims that the tense marking auxiliaries were not at all attested in the structure of *-no*, *-to* with direct object complement during the Middle period, and appeared in their structure in later centuries for the first time (Lavine 2013). Billings and Maling (1995) even envision the advent of tense marking auxiliaries in Ukrainian *-no*, *-to* predicates as a phenomenon of as late as early 1900s (17; 21).

It is generally believed that Middle Ukrainian allowed for more syntactic variation in the realm of tense marking auxiliaries in the structure of passivoid phenomena. While in contemporary modern Ukrainian the tensed verbs in both agreeing passives and in *-no*, *-to* are restricted to the copulas *bulo* and *bude*, the copula types employed in Middle Ukrainian are reported in literature to have been much more diverse. Namely, the passivoid phenomena historically have apparently been frequently attested with present copula *byti* (Bulachovskyj 1950, 378) and Polish-like copula *zostati* (Bevzenko et al 1978, 308-309). Besides, the *-no*, *-to* structure is reported to have co-occurred with the aorist copula *byst'* (Doros 1975, 93). Moreover, hybrid tensed verbs like *staty* „become“ and *zdavatysja* „appear“ in place of copula *byti* in periphrastic passives in Middle Ukrainian syntax have been apparently employed as well (Arpolenko 1983, 38). Besides, in contrast to Middle Polish, where the modal particles in the structure of *-no*, *-to* usually co-occur with tense marking auxiliaries, it is not clear whether the complementizers *aby* and *žeby* trigger past auxiliaries into the structure of subjunctive *-no*, *-to* in Middle Ukrainian. While in modern Ukrainian modal particles and tense marking auxiliaries usually co-occur, the distribution of these two constituents in *-no*, *-to* historically has not been investigated so far.

The majority of accounts transmit the idea that the sole licit agent expression in any construction type in contemporary Ukrainian is the instrumental agent. Hrinčenko's dictionary

(1907) however claims that *od*-PP can be employed to designate an agent too. Kurylo (1925, 44) and Tymčenko (1926, 74) describe *vid*-PP as an agent expression typical of passivoid phenomena in standard Ukrainian, and Maling (1995) mentions that *vid*-PP is employed in Ukrainian dialects as well (81). Both Jižakevyč (1975, 264) and Wieczorek (1994, 49) describe the agent in the shape of *u*-PP, a cognate of North Russian agentive *u*-PP as the standard agent expression in Ukrainian *-no*, *-to* clauses, while Fici Giusti (1994, 123) and Franks (1995, 343) observe that this agent expression does not co-occur with modern Ukrainian *-no*, *-to*. There are disputes over the origin of instrumental agent in the structure of *-no*, *-to*: while Shevelov (1963, 141) and Wieczorek (1989, 118) attribute its presence to the internally motivated factors, Zatoŭkanjuk (1984) envisions it as the result of contamination with Russian agreeing passives (5-7). To say more, there are accounts, like Kovaliv (1947), arguing that *-no*, *-to* predicates do not tolerate any agent expressions at all, since they function as finite verbal forms with an implicit performer.

The accounts on agent expressions historically are disperse and contradicting too. While Žovtoŭbrjuč (1980, 288) observes that the agent expressed in the instrumental oblique had been in the process of decay in the course of the Middle period, Slyn'ko (1973, 155) claims that it grew in productivity in the course of the Middle period. In contrast Arpolenko (1983) generally argues that the agent in the shape of *ot*-PP, but crucially not the instrumental agent, was usually employed to denote an agent in Middle Ukrainian (278). Likewise, Filin (1971) mentions that the instrumental agent was seldom used in the structure of *-no*, *-to* predicates. Besides, there are accounts, like Billings and Maling (1995) that envision the advent of instrumental agents in the structure of *-no*, *-to* as an early 20<sup>th</sup> c. phenomenon (21). To Bulačovs'kyj (1977) the *ot*-PP on passivoid phenomena in Ukrainian historically represents a borrowing from Church Slavonic (568), while Žovtoŭbrjuč (1980) is inclined to interpret *ot/od*(")-PP, together with *č(e)rez*(")/*prez*(")-PP as Polish syntactic elements. Even though it is obvious from the accounts above that Middle Ukrainian allowed for more syntactic variation in the realm of agent expressions than Modern Ukrainian, none of the accounts offers any concrete data on their shape and distribution.

While in modern Polish *-no*, *-to* equally attach to both perfective and imperfective verb stems, the rules for the formation of the *-no*, *-to* predicates in modern Ukrainian are not clearly cut. Most of the accounts however agree that contemporary Ukrainian *-no*, *-to* predicates are formed predominantly from perfective transitive stems: it is observed that *-no*, *-to* formed from imperfective verb stems are rarely found, since they do not sufficiently convey the meaning of an action in its consequences that still exist – apparently their core

meaning in contemporary Ukrainian. The accounts on diachronic Ukrainian *-no*, *-to* are reported to differ substantially from their modern counterparts in allowing different predicate types to attach to them. Historically *-no*, *-to* predicates are generally believed – without any concrete data on the topic though – to be formed from both perfective and imperfective, from transitive and intransitive, and even from iterative verb stems. Apparently there was no lexical restriction on the formation of *-no*, *-to* predicates from imperfective transitives in Polish historically as well. Still, it is generally believed that in Old and Middle Polish there are hardly any *-no*, *-to* formed from intransitive verbs: formation from intransitives in Polish *-no*, *-to* becomes productive only in later centuries.

In contrast to modern Polish, modern Ukrainian allows direct objects under sentential negation appear both in genitive and in accusative. Partitive genitive in modern Ukrainian can be substituted for structural accusative as well. Genitive case in general, and the genitive of negation in particular are envisioned as factors that might have played a role in the establishment of both Polish and Ukrainian accusative assigning *-no*, *-to* predicates. Just like numerical phrases, genitive, partitive genitive and the genitive of negation are known to have triggered the default agreement in *-no*, *-to* historically. The animacy of the underlying object has been regarded as a significant factor in genitive vs. accusative marking on the direct object complement of *-no*, *-to*. Genitive plural with animate NPs in the function of structural accusative is attested in Eastern Slavonic already in the 14<sup>th</sup> c. The number of genitive forms to express structural accusative is reported to have grown considerably in the Middle period: new accusative-genitive forms in the function of structural accusative apparently outnumber the old nominative-accusative forms. Besides, construction's compatibility with the genitive of negation is diagnostics of its status historically: if it undergoes the genitive of negation, it would speak for its non-passive status.

### **3.4. Setting objectives**

**Objective 1: trace the relative frequency of *-no*, *-to* predicates in relation to periphrastic passives in Middle Ukrainian and – to a lesser degree – in Middle Polish texts.**

**1 (a): determine the frequency and distribution of passivoid phenomena across the centuries in Middle Ukrainian texts.**

**1 (b): determine the frequency and distribution of passivoid phenomena across texts of different type in Middle Ukrainian.**

**1 (c): determine the frequency and distribution of passivoid phenomena in Middle Polish texts.**

**Objective 2: Investigate tense marking auxiliaries in the structure of *-no*, *-to* in Middle Ukrainian and (to a lesser degree) in Middle Polish corpus of texts.**

**2 (a): determine whether *-no*, *-to* predicates co-occur with past, present and future tense marking auxiliaries.**

**2(b): determine the degree of variation in the domain of tense marking auxiliaries, as well as their distribution in periphrastic passives and in *-no*, *-to* predicates over centuries.**

**2 (c): clarify whether the presence of complementizers (modal particles) triggers the tense marking auxiliaries into the structure of Ukrainian and Polish *-no*, *-to* historically.**

**Objective 3: determine the shape and distribution of agent expressions in our Middle Ukrainian corpus of texts.**

**3 (a): determine typical agent expressions for different construction types and text types in Middle Ukrainian and Middle Polish texts.**

**3 (b): determine differences in shape and distribution of agent expressions in North Ukrainian vs. Central Ukrainian language variety.**

**Objective 4: determine the distribution of *-no*, *-to* with respect to predicate type in Middle Ukrainian, and – to a lesser degree – in Middle Polish.**

**4 (a): determine the general distribution with respect to predicate type – perfective vs imperfective, iterative vs non-iterative – in both *-no*, *-to* and agreeing passives.**

**4 (b): determine the changes with respect to predicate type distribution in the course of the Middle period in *-no*, *-to* and in periphrastic as well as participial passives.**

**Objective 5: Investigate the lexical and morphological content of the NP of *-no*, *-to* of the**

**Middle Ukrainian period.**

**5 (a): investigate changes in morphological composition of the NP of *-no*, *-to* of the Middle Ukrainian period.**

**5 (b): check Shevelov's (1969) thesis on two morphologically identical but syntactically divergent *-no*, *-to*.**

## 4. Corpus linguistics and diachronic syntax

“Corpora: A window to the past of the language”

Anke Lüdeling

### 4.1. Qualities of modern corpora

Corpus linguistics, or the study of natural language as manifested in field-collected samples of texts, offers a number of methods that help to arrive at concrete and reliable linguistic data. “In a sense, historical linguistics is always a corpus linguistics: There is no empirical base for it other than the corpus” (Meyer 2012, 28). Still, the history of the corpus linguistics as a discipline has not been without thorns. Chomsky (1957), who never argued against diachronic corpora in particular, generally rejected early corpora as the sole explicandum of a natural language, promoting the rationalist approaches and the introspection-based frameworks instead. The recent decades however have witnessed the rise of highly sophisticated modern corpora as a powerful tool in the study of a language that make possible the investigation into the domains of historical linguistics never imaginable before. Lüdeling (2008) observes that “[t]he introduction of corpora has had a revolutionary effect on language studies [...]. This is particularly true of historical linguistics [...]. [I]n the present world the creation of corpora has been a matter of life or death for the future of evidence-based historical linguistics, at least in the study of extensively spoken living languages” (53).

A modern corpus, as elaborated in McEnery and Wilson (1996/2002), possesses four basic qualities: sampling and representativeness, finite size, machine-readable form and a standard reference. Sampling implies modeling the linguistic reality representative of the entire language variety under investigation that provides us with potentially accurate picture of its tendencies and proportions. To arrive at what McEnery and Wilson (1996) call an „average out“ of the entire language population, samples of representative texts of various types and authors instead of complete works are selected. The finite size of the corpus makes it a reliable source of quantitative data, in contrast to open-ended monitor corpora better applicable in qualitative and lexical research. Moreover, finite size corpora tend to be more rigorously sampled than non-finite corpora (cf. McEnery and Wilson 1996<sup>82</sup>).

There are several data formats for encoding documents into a machine-readable form.

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82 „Part Two. What is a Corpus, and What is in it?“ These are web pages offered to supplement the book *Corpus Linguistics* (1996) by T. McEnery and A. Wilson. <http://www.lancaster.ac.uk/fss/courses/ling/corpus/>.

One of them, XML (.xml), or Extensible Markup Language, has evolved as a standard textual format for electronic data exchange. Machine-encoded corpora are electronically stored and can be enriched with extra information, or be annotated. Annotation is the process and the result of marking data with additional information relevant for research at hand. Annotating documents is the core purpose of GATE (General Architecture for Text Engineering), a tool for natural language processing that uses machine-readable formats like XML (.xml) as the underlying platform. GATE provides a set of language processing resources, or modules, that can be (re)grouped in order to create new application pipelines, or new chains of data processing stages, where the output of one stage is simultaneously the input for the next one.

Several processing resources can be run automatically over a machine-encoded text. The tokeniser is a processing resource that splits each text into words, numbers, punctuation signs and similar atomic elements called tokens; the sentence splitter segments the texts into sentences. The token annotation in the input document is a basic requirement for further part of speech annotation, also called tagging. Each token, once available, is labeled with the part of speech tag by a processing resource called tagger. Additionally, part of speech tagging produces a lemma, or canonical form for each word in the text that has been tokenized and tagged. On top of tagging, corpora can be annotated syntactically or parsed. Fully parsed corpora are called Treebanks and are used to study syntactic phenomena<sup>83</sup>.

A corpus ideally represents a standard reference for the language variety under scrutiny, providing a yardstick by which successive studies can be measured, and potentially generating linguistic debate based on serious and reliable empirical data (cf. McEnery and Wilson 1996). To become such a standard reference for linguistic community, an annotated corpus must first be made available online as a database, and its data should be made easy to access, search and retrieve for users without special training in corpus linguistics. There are several open source search and visualization tools for multilayer linguistic representation electronic corpora can be electronically published with.

## **4.2. Construction, coding and application of MuDi (Middle Ukrainian Diachronic Corpus)**

### **4.2.1. Methods, standards and tools**

Methodologically, the present study is the continuation of the experimental tradition of publishing high quality electronic data in an open, standard, machine-readable format

<sup>83</sup> Syntactic annotation is an extremely time consuming procedure that requires a team of properly schooled linguists, so that there is not way to carry it out in this project.



envisioned, established and elaborated by Roland Meyer, Björn Hansen, Ernst Hansack and other team members in the process of compiling and coding of RRudi (Regensburg Russian Diachronic Corpus<sup>84</sup>) and PolDi (Polish Diachronic Research Corpus) as a part of tasks formulated within a DFG project<sup>85</sup>. The outstanding accomplishment of the project „Corpus Linguistics and Diachronic Syntax I: The Grammaticalization of Non-Canonical Subjects in Slavonic Languages“ was the elaboration of automatic morphological analyzers for Old Church Slavonic (tagger) and Old Russian (quesser), that was designed as finite-state automaton (cf. Meyer 2012, 44-46). These two analyzers have been experimentally run in combination with Helmut Schmidt's TreeTagger for modern Russian in order to make a step toward the elaboration of a well-rounded tagging procedure for RRudi and future corpora. In similar vein, drawing on the experience gained from the implementation of RRudi corpus, for the present project we have experimented with the development of a quesser for Middle Ukrainian that is to be used in combination with Natalia Kotzyba's morphological analyzer for modern Ukrainian.

As a common practice in the field, a well-balanced combination of automatic processing resources and manual annotation has been generally aspired in the course of both projects. The annotation process has been shaped as a flexible one. Regular expressions with JAPE have been employed to normalize, if necessary, the already existing token annotations. To avoid typing errors and unintentional text corruption, the manual input routines have been restricted by schemes and, additionally by the read-only mode in GATE. While a multi-level standoff XML format was selected for RRudi and PolDi (cf. Meyer 2012, 39-41), for the present project<sup>86</sup> a new standard with multiple independent layers of annotation including tokenization, part of speech tagging, and morpho-syntactic segmentation has been elaborated. For tagging procedure, a fixed order of grammatical categories has been defined for every part

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84 RRudi consists of diachronic Russian texts of different types and genres, and is accessible online under <http://rhssl1.uni-regensburg.de/SlavKo/korpus/rrudi-new#section-1>.

85 The DFG [Deutsche Forschungsgemeinschaft, engl. German Research Foundation] project “Corpus Linguistics and Diachronic Syntax I: The Grammaticalization of Non-Canonical Subjects in Slavonic Languages” was supported by the German Research Council (DFG HA-2659 1-1; Project leaders: Prof. Dr. Björn Hansen and Prof. Dr. Ernst Hansack, University of Regensburg). See Meyer (2012) for details on the structure, coding work flow, and a proper exploitation of the diachronic corpora RRuDi and PolDi.

86 The present DFG project “Corpus Linguistics and Diachronic Syntax II: Subject Case, Finiteness and Agreement in Slavonic Languages” (DFG HA-2659 1-2; Project leader: Roland Meyer, Berlin) builds upon the previous project, “Corpus Linguistics and Diachronic Syntax I: The Grammaticalization of Non-Canonical Subjects in Slavonic Languages” that focused on the diachronic realization of non-canonical subjects, i.e. superficially unrealized (null) subjects, as well as non-agreeing and non-nominative subjects in Russian and Polish. The present project focuses on Middle Ukrainian and Middle Serbo-Croatian language variety. Under the scrutiny are the deviations from the standard model of agreement, and variation within case assignment. An important sub-goal of the project is the construction of the research corpora of Bosnian/Croatian/Serbian and Ukrainian. In the long run, we would also like to demonstrate how corpus technology can be successfully used in diachronic research.

of speech. The order of elements resembles, with marginal deviations, the standard established in Hanne Eckhoffs Project PROIEL. While tokenization and part of speech tagging have been run automatically, the morpho-syntactic segmentation of all texts had to be performed manually, since we know of no tool that would coherently segment sentences into clauses.

To coordinate project related information flow and data exchange, an online database conceived as a central place for all project activities has been created using ProjectPier software. The database favored a flexible task- and work flow management, since it was used by the project members as a general reference crossroads for standards and tasks to be carried out. The database was designed to include Wiki-pages with key information on data processing stages (Word to XML), on software installations with direct links on them (GATE, Notepad++, python-2.7.5, Annis-3-Kickstarter, Salt-n-Pepper, Oxygen, R, Xerox Finite State Tools), on concrete corpora work flow steps (OCR => TEI => GATE/Excel =>ANNIS), and on the annotation standards described below. Additionally, some relevant issues on linguistic theory, language change, methods and procedures, as well as on statistics have been made available as a back up reading.

The AnnoSet Export, or the list of obligatory annotations, elaborated for the current project obligatorily includes the annotations below:

- utok (the coding is obligatorily Unicode<sup>87</sup>, no further orthographical normalization)
- rtok (slight orthographical normalization, i.e. titlos and superscript characters are dissolved )
- pos (morphological part of speech)
- gram (grammatical analysis)
- lemma (canonical word form either in Church Slavonic or in standard modern orthography)
- clause (a minimal unit of proposition, usually consisting of at least a core argument and a predicate)
- sentence (a minimal unit of language)

The supplementary Annotation Set to optionally mark subject properties and the information structure includes more general annotations below:

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87 Even with a diacritic-free machine-readable text (which is not the case with our texts), issues of encoding continue to be vital. Encoding other than Unicode is not supported by XML standard and cause serious problems in language processing. A vivid example of XML incompatibility with non-Unicode signs is the SlavonicSophia encoding used by our Ukrainian colleagues for *Luc'ka zamkova knyha*. Consequently, the processing of *Luc'ka zamkova knyha* demands the elaboration of a special Unicode converter tool that is yet to be done.

- subjType (syntactically and semantically specified type of the subject, e.g. NP, pronoun, pro, impers-indef, etc.)
- subjIS (information structure related properties of a subject, e.g. topic, focus, givenness)
- subjRef (reference, e.g. anaphoric, deictic)
- subjSyn (specific syntactic properties of a subject)

The completed annotations can be transferred with Annotation Set Transfer GATE Processing Resource into ANNIS, or ANNotation of Information Structure tool. In the process of conversion to ANNIS, an open source cross platform corpus tool and a web interface that has been selected for its superb qualities of visualization and simple querying of multilevel corpora, the names of features are ignored, only a comma-separated list of values is taken over. The tokens are generated automatically from string values by GateImporter. Alternatively, the completed annotations can also be transferred via an export sheet generated with a JAPE pattern engine, into a tabular form spreadsheets like Microsoft Excel. Spreadsheets in tabular form are suitable for statistics software R. R is a free and open source software environment and a handy descriptive statistics tool. It allows i.a. to evaluate data sets, do classical statistical tests on the encoded data, visualize categorical and non-categorical data, make plots and diagrams to neatly summarize the results of our investigation.

#### **4.2.2. Corpus work flow: steps toward corpus implementation**

To begin with the corpus building for Middle Ukrainian language variety, we first of all examined classical anthologies on the Ukrainian literature published by the Ukrainian Academy of Sciences in order to accurately determine the tendencies and proportions of the Middle period. Besides, to cover different registers of the Middle period, we also decided to include several non-literary administrative texts, like court files and trial records that have been made available to us by our Ukrainian colleagues from the Academy of Sciences. The result of our examination was a list of literary and non-literary works that should model the linguistic reality of the entire Middle Ukrainian population. To arrive at maximally fair average of the entire language population, both complete texts and samples of representative texts have been selected. The majority of selected literary works have already been scanned and made available on the website <http://izbornyk.org.ua/>, a huge electronic collection of resources with comprehensive editorial comments on them, that looked suitable for a diachronic quantitative investigation of the kind. Still, since we did not know in how far these

texts could be regarded as high quality resources, we checked their authenticity on the basis of random samples drawn from various text types<sup>88</sup>. The careful examination of electronic texts and their paper originals revealed that the texts are in fact reliable and, save one major deviation – the use of the Serbian letter “dje” (Ђ) in place of Cyrillic “jat” (Ѣ) – correspond in their graphical representation to their paper counterparts. Then we obtained the permission to process the texts from <http://izbornyk.org.ua/>.

Digitized and accessible online, but still not machine-encoded, the texts required parsing of HTML (.html) pages (hypertext markup language, a standard for web pages) into a suitable XML format for import into open source GATE platform. Scanned editions from [izbornyk.org.ua](http://izbornyk.org.ua) had already undergone OCR, or Optical Character Recognition, usually performed with a FineReader tool<sup>89</sup>, and obviously some manual correction. The texts however still contained practically inevitable post-OCR typos, together with innumerable footnotes and remarks<sup>90</sup> in modern Ukrainian within the text body to get rid of. After the footnotes and remarks were automatically deleted and typos partially corrected, the texts were saved in a word processor different than Microsoft Word – in OpenOffice Writer (.odt) – a free and open software selected for a smooth sliding into a machine-encoded format XML. It is already at this initial stage in OpenOffice Writer that the relevant pieces of information about the texts are imported into the structure of these texts. Such pieces of information are called meta data, or data about data, the digital equivalents to paper card catalogs in libraries.

Initially the meta data were inserted into the “user-defined properties” under “properties” in “file” in the main menu of OpenOffice Writer. The recent improvement of meta data representation and transfer is the property-value fill-in meta data table designed in accordance with the standards for international meta data representation called TEI, or Text

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88 Namely, we compared large extracts of the Cossack chronicle *Litopys Samovydeja* published by Dzyra (1971) with its correspondent parts on [izbornyk.org.ua](http://izbornyk.org.ua), and were impressed by the high quality of the *izbornyk* text. The typos were virtually non-existent and even the cursive was properly beheld. We did the same work with the text “Chmel'nickaja letopis' (1636-1650)” (1878) *Letopis' Samovidca po novootkrytym spiskam*, available on the [www.digitale-sammlunge.de](http://www.digitale-sammlunge.de) and came to the same conclusion. We also checked the quality of the texts below on the basis of random samples: *Černigovskaja letopis' po novomu spisku (1587-1725) i Kolomackie čelobitnye* (1890); *Létopis' sobytij v" Juzozapadnoj Rossij v" XVII věkě sostavil" Samoil' Veličko* (1864); *Otryvki iz dnevnika getmanskoj kanceljarii za 1722-23 gody* (1898); *Pamjatniki polemičeskoj literatury v Zapadnoj Rusi* (1882); *Pam'jatky polemičnoho pys'menstva kincja XVI – i poč. XVII st.* (1906); several chronicles from *Polnoe sobranie russkich letopisej* (1975/1980) (32/35); *Ukrajins'ka poezija: Kinec' XVI – počatok XVII st.* (1978).

89 ABBYY FineReader is a tool that converts paper texts into machine-encoded electronic data that can be processed with different tools.

90 Apart from large editorial articles on the texts, there are short editorial remarks in the text body of all *Izbornyk* texts, that are usually located in the footnotes linked to the parts of the text through corresponding superscript characters. We deleted all editorial comments in the text body and did not save them separately. As our texts no longer contain any explanatory remarks in the text body, the interested reader is kindly redirected to the [izbornyk.org.ua](http://izbornyk.org.ua) database.

Encoding Initiative. The meta-properties, or meta data that should later appear in GATE, include: title, author, dateFrom, dateTo, date, publicationStmt, editor, editingDate, keywords and genre<sup>91</sup>. These pre-defined meta-properties were manually matched with meta-values, or corresponding pieces of editorial information selected from the secondary literature entries on the texts available on [izbornyk.org.ua](http://izbornyk.org.ua).

Collecting meta-data for our texts, we tried to determine their time of origin with maximum accuracy; figure out the manuscripts or editions used by the editors; find out whether the text or its parts were originally written in Polish and later translated into Eastern Slavonic variety, which is especially common for the 16<sup>th</sup> c. religious polemics; select appropriate key words and accurately render the text type of each individual text; document, if available, the oscillating opinions by various researchers of the same work. Collecting information was especially time consuming for Belorussian-Ruthenian chronicles, the majority of which survived in later copies: the data was randomly scattered in the text body and its retrieval often required reading a large part of editorial comment on the chronicle.

We had to fill in the meta-data table with its respective meta-values in each text separately. The existing formatting in each .odt document has been deleted and the whole text formatted as a text body in order to ensure the generation of well-formed XML files. Marked with meta-data table and properly formatted, our numerous .odt files were now ready to be converted into a machine readable format XML (.xml) via a multi-platform Oxygen XML editor with strong Unicode support. To transform OpenOffice Writer (.odt) files to XML (.xml) files, an Export filter must first be loaded into Oxygen XML editor. The needed filter *oddtotei-XSLT*, or Extensible Stylesheet for Language Transformations, had already been elaborated in advance. Once loaded, this filter has then been automatically applied to all texts to ensure the uniform presentation of structured documents. Then we opened each of the generated XML files in Oxygen XML editor, once again did the formatting and checked the well-formedness of the files. Special attention was paid to XML syntax rules, i.e. correct matching of opening and ending tags and proper encoding of Unicode characters.

The well-formed XML files could then be processed within GATE platform. Modules relevant for our applications are GATE Unicode Tokeniser, RegEx Sentence Splitter and Generic Tagger plug in. Once run over the documents, they produce tokens, sentences, and part of speech annotations respectively. The part of speech tagging was initially done with Helmut Schmid's Windows version of TreeTagger and Serge Sharoff's parameters for modern

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91 In the meantime we prefer the term 'text type' instead of 'genre', since 'genre' is usually based on literary criteria alone.

Russian that had to be downloaded separately. As we have not found all the necessary parameters on Sharoff's website, after the careful examination of the problem, we had to write the missing .bat file ourselves, so that our texts could finally be tagged with part of speech annotations. The automatic annotating pipelines that had already been run upon texts, i.e. tokenising, sentence-splitting and tagging appear under Automatic markups in a tree-like view on the left side of the GATE interface.

Moreover, the process of annotation has been facilitated by helpful JAPE<sup>92</sup> (.jape) commands, that is Java based programs for Regular Expressions in GATE. JAPE commands have been useful for pattern-matching during post-processing of already annotated entities. The first JAPE command for post-processing was written to facilitate the normalization of the token 'Божия' in Poltava trial records, that randomly occurred with and without titlos. The rest of the needed JAPE commands have been modeled on the initial one<sup>93</sup>. As additional Processing Resource (PR), a Java based Groovy scripting PR was sometimes experimentally run over larger documents. This PR allows an arbitrary script to be run in a GATE application pipeline. The part of speech tagging must be performed on the document before the script splitter2tagger.groovy, having been loaded as a groovy-plugin, can be run. Running the Groovy script over the already tagged document produces the output of various construction types available under Automatic markups. These can be further investigated with the construction type under scrutiny in mind.

While application pipelines, consisting in our case of a GATE Unicode Tokeniser, RegEx Sentence Splitter and Generic Tagger plug-in, annotate the documents entirely automatically, annotation can also be done semi-automatically by running an application over the text(s) and then looking through it (i.e. with Groovy scripts), or annotations can be made per hand, that is manually. Manual annotation is usually done with a PR called scheme. Schemes are GATE components that can be loaded like any other PRs mentioned above. As the schemes coming with GATE are designed rather to facilitate the office work than to do grammatical analysis, we had to create a scheme of our own, defining types and features relevant for our investigation into Middle Ukrainian passivoid phenomena. Schemes allow

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92 JAPE, or Java Annotation Patterns Engine, is a component of the GATE platform, a finite state transducer, a machine with input and output tape, that operates over annotations based on regular expressions.

93 The command we employed is below:

```
Phase: translit
Input: Token
Options: control = all
Rule: TokenTranslit
({Token.string =~ "БЖ(и|ї|і)(я|Ѧ|А)"}):tok
-->
:tok.Token = { utok = :tok.Token@string, rtok = "Божия" }
```

annotation types and features to be pre-specified, so that during manual annotation, the previously defined options appear on the drop-down lists in the Annotation Editor Dialogue. The feature's values are traditionally presented as an array of buttons easy to select from.

As already discussed in Meyer (2012, 48), the GATE platform can be used as a local corpus manager, which means that the completed annotations can be exported directly from GATE into tabular form spreadsheets, and appear in the shape of data frames compatible with the statistics software R. In order to extract the relevant pieces of information and export them into a spreadsheet, a JAPE script was run over the encoded corpus of Middle Ukrainian texts. The JAPE script extracted the basic data below: document name, its time of origin, its author, its text type; and, crucially, numerous features and values that had been previously marked manually in the GATE platform using the Scheme PR, as well as the text of the clause for further reference<sup>94</sup> (cf. Meyer 2012, 48-49).

#### **4.2.3. Clause splitting in GATE**

We have established two basic annotation types that correspond to the two main buttons on the Annotation Editor Dialogue: ClauseScheme and GrammScheme. The type ClauseScheme was used to manually segment the sentences into clauses, since the automatic segmentation in GATE is only available for sentences. A machine-encoded annotated corpus is still of very little practical use for the linguistic community worldwide, as long as it does not contain the minimal units of proposition, or clauses, that allow the grammatical annotation to be anchored to a certain unit, so that it can be properly transferred, processed and evaluated afterward. The segmentation of the majority of literary texts into clauses was done by Olesia Lazarenko [a total of 938,697 token<sup>95</sup>], of administrative documents like court files and trial records by the author [a total of 406,114 token]. In the course of her work that took her about 6 months, Olesia Lazarenko came up with 89,758 clauses. The number of automatically generated sentences she annotated is 36,329, which means that each sentence was roughly split into 2-3 clauses. Since the sentences in trial and court records splitted by the author are very long, the clause-sentence ratio turned out to be slightly different for administrative texts

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94 The encoded corpus can be alternatively imported into ANNIS and then exported into statistics software R via ANNIS statistical tools, as described in Meyer (2012). Even though the mature ANNIS query language is better suited for linguistic needs (48), using a JAPE script can be more appropriate for the intermediate stage between coding and retrieval, when annotated categories have to be tested and adjusted, new markup added and errors corrected. In the long run, the application of JAPE scripts helps to facilitate and automatize the process of manual annotation (49).

95 The corpus of literary texts was later enlarged with several more texts, that did not undergo splitting. Very roughly 500 tokens correspond to 1 page; which makes our literary corpus approximately comparable to over 2000 pages of printed text.

– each sentence was roughly split into 3-4 clauses.

The rules for clause splitting have been carefully discussed with all team members. The initial idea evolved around an overlapping multi-level nesting, or embedding of clauses, that would require the marking of the same clause at least two, and in most cases up to five or six times. Having estimated the work load-human resources ratio however, a simpler model based on minimal operating expense strategy was introduced as an alternative to the sophisticated clause embedding. This simplified segmentation strategy goes: the embedding, or the recurrent marking of the same sentence segment only occurs if a longer clause is disrupted by a shorter one, i.e. in case of a non-finite subordinate clause with typical for Middle Ukrainian gerunds in -čy, cf.: [*Mnozi ljudije, [i v domu sydjačy,] prez jalmužny i mylostynja, i služby božyji, i prez dobriji včynky dochodjat' misc' svjatyč...*]; or gerunds in -všy, i.e.: [*Inšyje dochodjat' misc' svjatyč, no skoro vertajut'sja, [ne vydivšy dobre,] povidajut' i chvaljat'sja tym...*]. The “disrupting” clause can also be a finite clause, i.e. a simple sentence specifying a larger one, i.e.: [*Az že mnohohrišnyj, [ščo mil v rukach sobranija svojeho,] ne imal-jem tych, kotoryje dobre znaly miscja svjatyje,...*] (*Perehrynacija, ili put' do Iherusalyma*). The commas, that (at times) might coincide with clause limits, have not been taken as a criteria for segmentation of course.

Despite clearly formulated rules and stimulating discussions that accompanied the splitting, the task was far from easy and transparent. Provided the content of the sentence was clear to us, the fluctuating syntax of Middle Ukrainian and misleading punctuation signs made it at times complicated to mark the hierarchical relationships of several predicates within a sentence. The task has been further hindered by the fact that non-finite verb forms like participles in -uči and -všy, as already mentioned in classical historical grammars (cf. Bezpal'ko 1960, 17), enjoyed a high degree of predicate-like qualities in Middle Ukrainian, so that many page-long sentences did not even contain a single finite verb form. The task of sentence splitting was also hindered by the huge conglomerates of clauses of different type intermingling in two- or even three page long sentences, especially typical for *Poltava trial records* (1668-1740) and *Court files of the Žytomyr town administration* (1590; 1635).

The further difficulties we faced are summarized below: different temporal marking of several clauses united under the same core argument; grammatically different predicate types (like aorist and *l*-participle) under the same argument; the conglomeration of non-finite clauses with gerunds of different types; the intricate relation of finite and non-finite predicates in a sentence, connected with a conjunction “i”; the conglomeration of conjunctions “i” and “a”, whose predicates are related to the same core argument; past/present gerunds in -všy and



-čy that contain additional specification-clauses that again contain further clauses.

We would like to illustrate the tricky nature of the variation-rich Middle Ukrainian syntax by an ex picked by Olesia Lazarenko to be discussed with the author. In Middle Ukrainian, the verbal flexion -v that is attested in arbitrary distribution with *l*-participle, encodes both 3<sup>rd</sup> person singular simple past and non-finite gerundial forms. Thus, the following sentence has a two-fold interpretation. Namely, if verbal forms in -v are interpreted as finite verbal forms, then the segmentation would proceed this way: [...*Chmelnyckij razdělyv" Ukraynu na 15 polkov" y postavyl" v" nych" polkovnykov"*.<sup>96</sup>] [*spysav" samych reestrovych" tolko kozakov", i poslal" spysok" k" hosudarju...*<sup>97</sup>].

If verbs in -v are interpreted as non-final verb forms, then the segmentation would go: [[...*Chmelnyckij razdělyv" Ukraynu na 15 polkov"*] *y postavyl" v" nych" polkovnykov"*.] [*spysav" samych reestrovych" tolko kozakov"*,] *i poslal" spysok" k" hosudarju*<sup>98</sup>] (*Kratkoe opysaniye Malorossiy*). The author favored the finite reading of verb forms in -v, whereas Olesia Lazarenko inclined to the reading with non-finite gerunds in -v, the possibility of which she backed up with the following ex, where a verbal form in -v is unmistakably non-finite: [*Toho ž" roku Asmin" aga, ot tureckoho sultana čauš", prislannyj k" Chmelnickomu, privez" šablju, choruho" i bulavu, [sovětuja emu [s" Ukrainuju, ot" polskoho korolja otstupiv",] podklonitsja pod tureckuju oblast'*]].

#### 4.2.4. Grammatical categories marked in GATE

The second, much more complex Type, GrammScheme, was elaborated to manually mark grammatical categories relevant for the project investigation into passivoid phenomena in Middle Ukrainian. The GrammScheme we have been using in the course of grammatical annotation of passive and passive-like structures in Middle Ukrainian texts consists of several features, while each feature is split into relevant, and, if necessary, numerous, enumeration values. The annotation scheme has been elaborated with the core features we pre-defined in mind, and brought inside GATE platform via the creole.xml file. It has taken about eighteen months to do the grammatical annotation of all non-administrative texts and all official

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96 The sentence finalizing punctuation mark and the non-capitalized word following it make the segmentation of this sentence(s) particularly difficult, since we cannot tell whether the point should in fact be interpreted as a comma or as a dot.

97 Segmented this way, the sentence would be translated as below: „Chmelnyckij divided the Ukraine into 15 regiments and allocated colonels there, registered the regimental Cossacks alone, and sent the list of them to His Majesty“.

98 The translation goes: „After having divided the Ukraine into 15 regiments, Chmel'nye'kyj allocated colonels there; having registered the regimental Cossacks alone, he sent the list of them to His Majesty“.

documents. Below we list the features that we have pre-defined and annotated, and offer justification for our choice.

Under the cover term „passivoid“ we primarily understand three basic construction types: *-no*, *-to* predicates with direct object complement (NTF), that might occur with overt tense marking auxiliaries; the standard canonical, or periphrastic passive (CP); and the participial passive consisting of a passive past participle form and a head noun, no copula available per definition, (PPP). The reflexive passives are excluded from the present study due to the general take on their rarity in Middle Ukrainian syntax, as well as to the results obtained in a previous study carried out by the author<sup>99</sup>.

Since the Middle Ukrainian texts under scrutiny manifest a wide range of cross-linguistic variation and co-existence of phrase structure constituents from different languages and language varieties, marking was done in awareness of their Ruthenian, Polish, Russian, and Church Slavonic morphology. Annotations include i.a. such phenomena as *-no*, *-to* forms themselves and their correspondent NPs, passive participles and (partially) their NPs, tense marking auxiliaries that occur in *-no*, *-to* and in canonical passive, adjunct by-phrases, that we prefer to call „agent expressions“, if available. We also marked the predicate type of the verb in all three construction types to see whether the constructions admit a different verb class historically. Experimentally we also marked modal particles to figure out if they trigger the tense marking auxiliaries into the structure of Middle Ukrainian *-no*, *-to*.

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99 Lavrinec' (2013) observes u.a. after Rusanivs'kyj (1971) that in Ukrainian writings of 14<sup>th</sup>-17<sup>th</sup> c. verbs in *-sja* with passive meaning are very rare. She further remarks that isolated instances of reflexives with passive-like meaning attested in legal documents of 14<sup>th</sup>-15<sup>th</sup> c. are ambiguous (91). Likewise, Bevzenko et al (1978) argues that there is no unambiguous exx for reflexive in *-sja* in the passive meaning in the charters of 15<sup>th</sup> and 16<sup>th</sup> c. (307), remarking however, that there was a tendency in Old Ukrainian to express the passive meaning with the reflexive verbs formed from imperfectives, while perfectives were usually used in canonical passive (309). Rusanivs'kyj (1971) claims that reflexives in *-sja* with or without direct object represent a very rare phenomenon in the Ukrainian monuments of the 14<sup>th</sup>-17<sup>th</sup> c. Rusanivs'kyj has not found a single unambiguous record for the use of reflexive verbs in the passive meaning in the 14<sup>th</sup> and 15<sup>th</sup> c. administrative documents. The leading way to express the passive meaning was to use the predominantly perfective passive participles in combination with copula *buty*, which could be left out in the present tense (289). Discussing accusative assigning reflexives in *-sja*, Rusanivs'kyj (1971) claims that they are not typical of vernacular Ukrainian. Singular records that can be found in the trial records of 14<sup>th</sup> and 15<sup>th</sup> c. are ambiguous. Rusanivs'kyj (1971) further observes that the attempts made in the 20ies of the 20<sup>th</sup> c. to introduce *-sja* forms into literary language did not succeed. Rusanivs'kyj interprets them as non-normative constructions, attested due to the influence of Polish. He interprets both *-no*, *-to* and *-sja* with accusative complement as active constructions (288). Kurylo (1930) suggests that argument assigning reflexives in *-sja* have become widespread under the influence of *-no*, *-to* participles with direct object (34). Janke (1960) claims that Old Russian did not have reflexive passive construction (25). The author's article "Syntactic Variation and the Realization of Agent in Middle Ukrainian: a Corpus-based Diachronic Investigation" has shown that reflexive passives with agentive oblique in Middle Ukrainian texts are dubious and represent a marginal phenomenon.

In similar vein, Meyer (2012) observes that the reflexive passive construction in Middle Polish seems to have been impersonal from the very beginning. It could only be formed from transitive verbs. Besides, the rare instances of by-phrases on reflexive passives of the Middle Polish all allow for an instrumental, source and vehicle interpretation (242; 247).

Historically Ukrainian allowed for more syntactic variation within the realm of oblique subjects and tense marking auxiliaries than synchronically. Looking at how the doer of the action is expressed in our Middle Ukrainian texts, we have discovered several overt agent expressions that are no longer attested in contemporary Ukrainian. While the standard agent expression in any construction type in modern Ukrainian is the instrumental agent oblique, we had to mark the following core phrases to denote an agent in Middle Ukrainian: *ot/od*-PP; *prez*-PP; *č(e)rez*-PP; and instrumental agent. The appearance of the auxiliary verb is not a universal property of the passive<sup>100</sup>, since there are structures which are obviously passive but which lack the passive auxiliary, cf. reflexive structures. Still, since the presence of tense marking auxiliaries has been consistently qualified as crucial in the formation of *-no*, *-to* predicates in literature, and since we are also interested in the copula type used historically in both periphrastic passives and accusative assigning *-no*, *-to*, the following types of tense marking auxiliaries have been marked in GATE: aorist; imperf; past-mod ua; past pol; past ru; past ru durative/habitative; past semi-mod ua; past semi-pol; pres pol; pres ru; fut ru.

We have also marked different verb classes in order to determine in how far *-no*, *-to* predicates formed (almost) exclusively from perfective transitive verbs in standard modern Ukrainian could be formed from imperfective and intransitive verb stems historically, to see how diachronic *-no*, *-to* differ from their modern counterparts in allowing different predicate types to take *-no*, *-to* forms in Middle period. We did the following marking: type – transitive or intransitive; Aktionsart – durative/habitual or iterative; aspect – perfective or imperfective verbs *-no*, *-to* and passive participles attach to.

In addition to specifying the syntactic environment of *-no*, *-to* predicates, potentially consisting of tense marking auxiliaries and agent expressions, we have also concentrated on the properties of the nominal phrase itself, especially on the morphological and lexical content of the NP of the NTF. Scrutinizing the morphological and lexical content of the NP of the NTF with Timberlake's (1974) declensional types in mind, and paying attention to the presence or absence of tense marking auxiliary in the structure, might help us to check Shevelov's (1969) premise as to the availability of two morphologically identical, but syntactically divergent *-no*, *-to* constructions with neuter nouns in the NP, and, additionally, figure out whether one of them, as stated in Lavine (2013) and Österreich (1926), has de facto been re-interpreted from personal into impersonal after auxiliary drop from its structure

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<sup>100</sup>We take the following three phenomena as typical for all passives as syntactic de-transitives: the disappearance of the core argument from the subject position, its re-appearance in the object position, and the availability of a passive morpheme. The passive by-phrase, if present, is interpreted as a syntactic reflex of the subject, that have been downgraded to the status of a passive oblique.

in Middle period.

Following Shevelov's (1968, 202) assumption about the importance of numerical phrases and quantified expressions in the process of establishment of Polish *-no*, *-to*, we have consequently marked several types of numerals and quantified expressions<sup>101</sup> in the phrase structure of the Ukrainian *-no*, *-to*, that Shevelov (1968/1969) interprets as nominative NPs. So that we distinguish between unit of measure, Arabic numbers, quantifiers, numeral-like nouns, collective entities in the NP in order to figure out their frequency and syntactic environment in various text types. We also marked the genitive NPs of *-no*, *-to* in order to clarify whether or not the genitive used in place of accusative, as well as the genitive of negation might have been one of the triggers of accusative case marking in *-no*, *-to* historically.

#### 4.2.5. Data visualization: mosaic plots

Shevelov (1979) observes that “[t]he number of M[iddle]U[krainian] texts extant is very high. Many of them, however, remain unpublished”. Besides “[o]nly a fraction of texts written or edited in the M[iddle]U[krainian] period was designed for printing” (571). Shevelov (1979) further mentions that “[t]he amount of unpublished and undescribed records in state archives and private collections is enormous” (572). Since, as obvious from the citation above, the population<sup>102</sup> of objects, or Middle Ukrainian texts that have ever been produced, cannot be properly defined, there is no way to count all *-no*, *-to* forms and all instances of passivoid phenomena in the entire population of the Middle Ukrainian language variety.

Consequently, we had to draw (random) statistical samples that would represent the whole population in our analysis. The samples we have chosen can be described as representative of the entire population, since the majority of them belong to the canon and are thoroughly discussed in the secondary literature. The science of statistics uses such random samples of texts to draw conclusions and describe tendencies of the entire population. The idea behind statistics is to investigate a set of data and draw conclusions in terms of probabilities. Besides, statistics employs graphical methods to visualize the distribution of the phenomena being assessed. The visualization of data help to scrutinize data sets and

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<sup>101</sup>Corbett (1979) claims that the traditional split into numerals and other quantifiers is unnecessary for describing predicate agreement. The classification of quantifiers according to agreement with the predicate cuts across the numeral/other quantifier division (71).

<sup>102</sup>Under “population” we understand a complete number of objects that share one or more properties relevant for the statistical investigation at hand.

communicate observations to viewers. The rationale behind graphics is to help viewers evaluate results, observe tendencies, and discover patterns. As Baayen (2008) puts it, “[w]hile numerical tables [are] hard to make sense of, data visualization often allows the main patterns to emerge remarkably well” (22). Baayen (2008) and Gries (2013) are standard works for statistics with computing software R we have been consulting in the process of data evaluation and representation.

The objects, or texts under scrutiny, have both numerical and categorical values. Numerical values are the absolute numbers of records for each category being assessed; they will be needed to visualize the distribution of passivoid phenomena in each sub-set. The numerical values for two phenomena under scrutiny – NTF and CP/PPP respectively – will be weighted against the total size of all texts in each particular group. Such weighting is necessary, since the texts and text samples are of different size. The categorical variables, that is those with either “yes” or “no” values, have been employed to visualize the pattern of association between phenomena we are interested in, namely Copula Types, Agent Expressions, Predicate Types, N[oun]P[hrase]-Types on the one hand, and the corresponding construction type, that is NTF or CP, on the other hand. To visualize the relationship among both numerical and categorical variables, and coherently examine the composition of our frequency data, we are going to employ mosaic plots, a graphical method consisting of a number of boxes proportional to the number of elements in each particular sub-set of population.

To make graphics and visualize data we need contingency tables that are created from data frames in the computing environment called R. Data frames are core structures that consist of columns and rows, and can be loaded as a spreadsheet into R. Each data frame contains 2 variables. The first variable has 2 levels in all data sets described below: „NTF“ and „CP and PPP“. The number of levels of the second variable varies, since the shape and distribution of phenomena under scrutiny, e.g. Copula Types, might vary from sub-set to sub-set. If the probability distribution of one variable is not influenced by the presence of another variable, such two variables are considered independent. To determine whether the observed differences in measured phenomena arise by chance, tests of independence are employed.

#### **4.2.6. Data exploration: tests and linear regression**

In order to carry out an experiment on any set of data, the researcher must first determine a threshold value for significance level, which is in statistics designated by the

letter  $p$ . Setting a  $p$ -value helps to tackle the problem of the random sampling error: since our experiment is based on drawing the samples from a population of objects, the observed results might be simply due to the sampling error. Still, if the  $p$ -value is smaller than the threshold, the observed effect is supposed to reflect the general characteristics of the population rather than be due to the sampling error. We follow the common practice in the field and set the significance level to 0.05 for both Chi-squared and Fisher's test for all experiments in this thesis.

The Pearson's Chi-squared test of Independence tests the null hypothesis, or the statement that the row variables and column variables are not related. It is employed to determine whether differences between observed and expected values are the matter of chance, or the result of the given factors. The Chi-squared can be applied to one or more variables, each with two or more categories. It requires independent factors and mutually exclusive categories. A Chi-squared probability, or the  $p$ -value of less than 0.05 is usually regarded as sufficient to reject the null hypothesis. The same  $p$ -value is sufficient in case of Fisher's Exact test for Count Data, which is used for smaller data sets of two categorical variables. It is a non-parametric alternative to the Chi-Squared test, since it makes no assumptions about the probability distributions of the variables under scrutiny. We are going to conduct these tests using simple codes `chisq.test(table)` and `fisher.test(table)` in R. The tests cannot be used to test correlated data, because observations are always assumed to be independent of each other. Besides, to run these tests, the variables must have at least 2 levels, which is not always the case with our data distribution.

R can be extended with additional packages to carry out special tasks. We are going to employ an additional „rms“ package to run regression analysis on our data sets. Regression analysis has been central to the field of mathematics and is gaining on importance in the field of linguistics as well. Regression diagnostics is used for prediction and forecasting: it helps to clarify whether a dependent variable PPP\_or\_NTF is related to the independent factors „Copula“, „Agent“, „Subjunctive\_mood“ and „Predicate\_type“, and to explore the nature of their relations. The output of regression analysis includes coefficients  $C$  and  $D_{xy}$  that reveal in how far the employed model fits the observed data, as well as the coefficient of multiple correlation  $R^2$  that shows how well the data's variability is explained by a given model.  $R^2$  is a scalar that takes values between 0 and 1: a higher value indicates a better predictability of the dependent variable via the independent variable(s). The indexes  $C$  and Somers'  $D_{xy}$  measure the correlation of data and the model too:  $C$  of 0.5 and  $D_{xy}$  of 0 designate zero, or no correlation, while  $C$  of 1 and  $D_{xy}$  of 1 designate a perfect correlation.  $C > 0.8$  is

interpreted as sufficiently high to describe the correlation as a strong one.

The indexes  $G$ ,  $gr$ , and  $gp$  (g-index) measure the differences in mean among the data. Brier score measures how accurate the model's predictions are: 0 is the best predicting value, 1 is the worst. Goodman and Kruskal's gamma and Kendall's tau measure association, that is again the correlation of the model and the data-sets. Gamma and tau-a values lie between -1 and +1. The value -1 is a completely negative correlation, which means that the prediction is the inversion of the data, 0 designates no correlation, while +1 designates an absolutely perfect correlation. The second table contains coefficients that serve to compute the  $p$ -value, a numerical figure necessary to test the null hypothesis, or the statement that independent factors do not contribute to the value of the dependent variable. These indexes are secondary for the regression diagnostics: S.E. stands for the standard error, or the standard deviation in the data distribution, while the Wald  $Z$  is a parametric test for determining the value of the variable on the basis of sample estimates.

## 5. Qualitative observations and key tendencies of the Middle period

“The job of the linguist, like that of the biologist or the botanist, is not to tell us  
how nature should behave, or what its creations should look like,  
but to describe those creations in all their messy glory...”

Arika Okrent

The linguistic comments below, if not otherwise indicated, are based on personal experience with the texts. The aim is to give an overall idea of trends and tendencies in the domain of the Middle Ukrainian and, to a lesser degree, Middle Polish and Middle (Great) Russian language variety, without aspiring any deeper philological or linguistic analysis. The translations are mine. All mistakes and tergiversations are my own.

### 5.1. The desinence -o as a marker of predicates, modifiers and gerunds

Both non-administrative literary texts and court files from different regions of today's Ukraine confirm the observation made by Rusanivs'kyj (1971, 286), who claims that the 17<sup>th</sup> c. *-no*, *-to* participles are employed either in predicative or in attributive function. Moreover, the texts we have analyzed confirm that the *-no*, *-to* predicates of the whole Middle period (roughly defined as a time span from 1450 to 1750) seem to function either as predicates, or as modifiers. Below are exx of *-no*, *-to* employed as modifiers.

- (1) Bo koly toje tilo pokyneno ležalo  
But when that body<sub>\_ACC/NOM\_n\_sg</sub> abandoned<sub>\_NTF\_attr</sub> lay

[Bo koly toje tilo pokyneno ležalo v onom nespodivanom misci, tedy tiji, ktoriji tak tudy často mymo hodyly, vydaly na onom misci sviči horjačiji i holosy anhel's'kiji spivajučiji slyšaly.]

When the body lay abandoned in that unexpected place, those, who frequently passed by, saw burning candles in that place and heard voices of angels singing.

(*Žytie knjaziv Borysa i Hliba*, 17<sup>th</sup> c.)



- (2) no krasno stojit' [...] kamenem ohražd**eno**  
 but beautiful lie by stone enclosed\_NTF\_attr

[Bezvodno misto toje i sucho, no krasno stojit' okolo kamenem ohražd**eno**.]

That town is waterless and dry, but it is beautifully enclosed with the stone walls.

(*Perehrynacija, ili put' do Ijerusalyma*, 16<sup>th</sup> c.)

- (3) ...khdy toe tilo zabito njebož"čika [...] provadjeno  
 ...when that body\_ACC/NOM\_n\_sg slay\_NTF\_attr deceased escorted\_NTF\_pred

[...khdy toe tilo zabito njebož"čika Mar"tina Jurskoho provadjeno s kostjela  
 Vil"skoho...]

...when the slaughtered body of the deceased Martin Jurski was attended from the  
 Roman-Catholic church of Vil"sk...

(*Court Files of the Žytomyr Town Administration*, 1635 )

- (4) Kotoroe sino [...] svježo zložono vidjal"  
 That sino\_ACC/NOM\_n\_sg fresh stack\_NTF\_attr saw

[Kotoroe sino s khroun"tov" eho ml pana Viljama zabrano v stirty v f'olvarku i v  
 houn"ne // luhin"skim" svježo zložono vidjal"...]

I have seen that hay (that had been) gathered in the fields of Mr. Viljam, freshly piled  
 up in stacks in the folwark and in the barn, in (the village of) Luhin.

(*Court Files of the Žytomyr Town Administration*, 1635)

- (5) dobro li jest zloto iz ržeju mēšeno  
 good whether is gold\_ACC/NOM\_n\_sg with rye mixed\_NTF\_attr

[Uvažte ž, dobro li jest zloto iz ržeju mēšeno...]

Reflect, whether the gold mixed with rye is worthy.

(*Otpys na druhij lyst velebnoho otca Ypatija* by Kliryk Ostroz'kyj, around 1599)

- (6) ...majut nebo, nevyrovnoju zvězd ozdoboju ukrašeno.  
 ...have sky\_\_ACC/NOM\_n\_sg unutterable stars embellishment decorated\_\_NTF\_attr

...their sky is embellished by the unutterable beauty of the stars.

(*Otpys na druhij lyst velebnoho otca Ypatija* by Kliryk Ostroz'kyj, around 1599)

In contrast to NTF records above that are employed as modifiers the NTF in the ex below is employed as an adverbial adjunct, cf.:

- (7) ...to tych braly y tyraneno zabyvaly  
 ...then those took and torturing\_\_NTF\_attr killed

[I tak strilci, vyvidujuči, chto nezyčlyvym byl caru Ioannu, to tych braly y tyraneno zabyvaly, z gankov ot palacov carskych kydaly na dol; ]

So that Streltsy, having located those who were not friendly toward the Tsar Ioannes, took them and killed them torturing, throwing them out of the porches of Tzar's chambers to the ground.

(*Litopys Samovydcja*, late 17<sup>th</sup> c.)

- (8) by toe smiren'e věčno stojalo neporušeno  
 C that peace forever stood unhindered\_\_NTF\_attr

[Pro tož" by toe smiren'e věčno stojalo neporušeno so oboju storonu mezi nami, Poločjany i Rižjany, i pečjati esmo svoi privěsili k sei gramote]

So that our peace treaty be hindered by none of the two parties, neither by the citizens of Polock nor by the citizens of Riga, and we have attached our seals to this deed.

(*Russko-Livonskie Akty*, 1407)

## 5.2. Variation within the domain of participial endings: long vs. short forms

Moreover, in case of *-no*, *-to* headed by a neuter NP, the short form *-o* desinence seems to be interchangeable with the late Common Slavonic long form participial desinence *-oe/-oje* (which is also attested in standard Modern Belorussian). Below are exx for periphrastic passives with participles in *-o* and *-oe* respectively, headed by neuter singular nouns:

- (9) ...i voisko ich vse pobitoe na mescu zostalo  
...conj host\_NOM their all defeat\_AGR\_NEUT\_LONG on spot COP\_PAST\_POL

[I včínili boi i sěču veliku, i pomože boh velikomu knjazju Khindiminu, i pobet usich knjazei ruskich naholovu, i voisko ich vse pobitoe na mescu zostalo...]

The battle and a great slaughter took place, and the God helped the Grand Duke Gediminas, so that he soundly defeated all princes of Rus', and all their host was left slaughtered on the battlefield.

(*Litopys Archeolohičnoho tovarystva*, 16<sup>th</sup>-17<sup>th</sup> c.)

- (10) ...i voisko ich vse pobito na pljacu zostalo  
...conj host\_ACC/NOM their all defeat\_NTF on spot COP\_PAST\_POL

[I včynili boi i sěču velikuju, i pomožet' boh velikomu knjazju Khidiminu, i pob"et' vsich knjazei ruskich naholovu, i voisko ich vse pobito na pljacu zostalo.]

The battle and a great slaughter took place, and the God helped the Grand Duke Gediminas, so that he soundly defeated all princes of Rus', and all their host was left slaughtered on the battlefield.

(*Litopys Račyns'koho*, 16<sup>th</sup> c.)

The Polish chronicle reproduces the corresponding sentence with the neuter *-ne, -te* desinence in agreement with its core argument, cf.:

- (11) ...i voysko wszitko ich pobite na miesczv zostało  
 ...conj host\_NOM all their defeat\_PPP\_SHORT on spot COP\_PAST\_POL

[I pomoże bog wielkiemv xiędzv Iedimontu pobić wszitkich xiążath ruskich naglovą, i voysko wszitko ich pobite na miesczv zostało.]

And the God helped the Grand Duke Gediminas to soundly defeat all princes of Rus', and all their host was left slaughtered on the battlefield.

(*Wielkiego xięstwa Litewskiego i Zmodskiego kronika*, 16<sup>th</sup> c.)

Related variation within the domain of short vs. long participial endings has been attested in case of periphrastic passives headed by singular masculine inanimate NPs, cf.:

- (12) Melnik od Batyia spustoszon y pokażeny  
 Melnik by Batyj devastated\_PPP\_SHORT and ruined\_PPP\_LONG

Melnik was devastated and ruined by Batu Khan.

(*Chronika Bychovcja*, 17<sup>th</sup> c.)

- (13) byl poimanyi i v klětce zamknjenyi,  
 COP\_PAST\_RU caught\_PPP\_LONG and in cage locked\_PPP\_LONG

i po Jazii zavždy byl vožon,  
 and along Asia always COP\_PAST\_RU carried\_PPP\_SHORT

[Bojazokii cėsar turjeckii, ōt Jamjerljana, carja tatarskoho, byl poimanyi i v klětce zamknjenyi, i po Jazii zavždy byl vožon,]

The Turk Tsar Bojazokii was caught and locked in a cage by the Tatar Tsar Tamerlan, and was permanently carried around across Asia,

(*Kyjivs'kyj litopys*, early 17<sup>th</sup> c.)

- (14) Smolens'k [...] vzjat i pobiždennyj  
 Smolensk seized\_PPP\_SHORT and conquered\_PPP\_LONG

[Smolens'k z vsim udilom vzjat i pobiždennyj.]

Smolensk and the territory around it was seized and conquered.

(*Herojični stichi* by Ioann, 18<sup>th</sup> c.)

Related variation within the domain of participial endings has been also attested in periphrastic passives headed by plural animates, cf.:

- (15) edny pobitye, a druhie poimany [...] zostali,  
 some killed\_PPP\_LONG and others caught\_PPP\_SHORT COP\_PAST\_POL

[A tak, edny pobitye, a druhie poimany ot našich zostali,]

So that several were killed, others were caught by our army,

(*Chronika Lytovs'ka j Žmojts'ka*, late 15<sup>th</sup>-early 16<sup>th</sup> c.)

- (16) sut' [...] zložoni i vykljatiji  
 COP\_PRES\_RU removed\_PPP\_SHORT and damned\_PPP\_LONG

[I oni za to sut' z vrjadov duchonvych zložoni i vykljatiji.]

Due to that, they have been removed from the holy orders and damned.

(*Perestoroha*, 1605)

Such variation within the domain of long vs short form participles has also been attested in administrative formulas used at the end of each entry, cf.:

- (17) začatje i ōdpravovany byli  
 opened\_PPP\_LONG and executed\_PPP\_SHORT COP\_PAST\_RU

[...kotoryi e(!) vjedluh kon"stytucyi i(!) [...] začatje i ōdpravovany byli. ]

...that were opened and executed in accordance with the Constitution.

(*Court Files of the Žytomyr Town Administration*, 1634)

- (18)    **začatyje**            i    **ōdpravovanye**    byli  
          opened\_PPP\_LONG and executed\_PPP\_LONG COP\_PAST\_RU

[...kotoryje vjedle kon"stytucyi koron"njej [...] **začatyje** i **ōdpravovanye** byli.]

...that were opened and executed in accordance with the Constitution.

(*Court Files of the Żytomyr Town Administration*, 1634)

### 5.3. Parallel use of non-agreeing *-no*, *-to* forms and agreeing passives

Koneczna (1956) introduces the synchronic dialectal data from Mazur, an area in the North-East of today's Poland close to the Ukrainian border, in which *-ne*, *-te* neuter singular agreeing desinence is con-joined with several non-agreeing *-no*, *-to* predicates in the same clause, cf. *tén lén cy lup pakuyy bedo pšenzóne*<AGR>, *špulorvano*<NTF>, *osnorvano*<NTF> *i tkano*<NTF>, *i bėńže bželóny part po tkańu i tedy i syto lup kosulę, lup pšesceraduo, obrusy – cego xćafsy* (287). The obligatoriness of personal or impersonal predicate in this ex is not clear: nothing would speak against employing the predicates in the shape of *-no*, *-to* instead of *-ne*, *-te*.

A related ex with various types of impersonal clauses interwoven, and even together with two member predicates in one sentence, has been attested in *Mohylevs'ka chronika* (1742), a Middle Polish text that we have defined as potentially contaminated with Middle Ukrainian (or Middle Belorussian) syntactic elements due to its territorial affiliation to what is today's Belorussia, as well as the bilingualism of its author:

- (19)    Woysko            szwedzkie rozbito,    rozgromione,    w niewolę [...] popędzone  
          host\_ACC/NOM\_n\_sg    Swedish    defeat\_NTF    destroy\_AGR\_n\_sg    in captivity    drag\_AGR\_n\_sg

armata            y    amunicya [...]    przez moskwę [...] pozabierana  
          cannon\_NOM\_a-decl and munition\_NOM\_a-decl    przez-PP            drag\_PPP\_a-decl

[Woysko szwedzkie rozbito, rozgromione, w niewolę na Moskwę popędzone, armata y amunicya szwedzka przez moskwę wszytka pozabierana... ]

The Swedish army was defeated, shattered, dragged enchained to Moscow, while Swedish cannons and munitions were all taken by the Muscovites...

There are also related exx of modifiers in *-ne*, *-te* intermingling with the predicates in *-ne*, *-te* and predicates in *-no*, *-to* in this chronicle, cf.:

- (20) miasto Mohylow [...] cerkwiami jest ozdobione,  
town\_<ACC/NOM\_n\_sg> Mohylov by churches is\_AUX decorated\_AGR\_n\_sg

w cerkwiach kosztami i nakładami ukraszono  
in churches adornments and embellishments decorated\_NTF

[Jest tedy to miasto Mohylow obfite w ludzie uczone, pobożne, handlowne i w różne rzemiosła bogate, cerkwiami iest ozdobione, w cerkwiach kosztami i nakładami ukraszono i przy codziennym nabożństwie grekoruskim kwitniące.]

The town of Mohylov is thus abundant in educated, God obeying and enterprising people, it is rich in various craftsmanships; it is decorated with churches, which are trimmed with adornments and embellishments; and it is flourishing by its daily Orthodox church services.

- (21) węża tego zabito, y niedopuszczone do paniewki  
snake\_<ACC\_m\_anim> that kill\_NTF and not-permit\_AGR\_neut\_sg to girl

...but that snake was killed and not permitted to reach the girl...

The exx above suggest that historically *-ne*, *-te* and *-no*, *-to* forms could be used interchangeably.

#### 5.4. Variation within the domain of agent expressions

To denote an agent in any construction type in codified modern Ukrainian there is no choice but to employ the bare instrumental. Historically however, Ukrainian allowed for more syntactic variation within the realm of agent phrases. Most numerous agents in periphrastic

and participial passives in the Middle Ukrainian texts we have analyzed are those expressed in the form of *od/ot-PP*, cf.:

- (22) *ot markhrabov brandeburskich zradlive zabitij*  
 by/from\_PP Marggrabowians\_GEN of Brandenburg\_GEN treacherously killed\_PPP

[Tot osmoho meseca panovanja svoeho **ot markhrabov brandeburskich** zradlive zabitij Kromer.]

In the eighth month of his reign, Kromer was treacherously murdered by the citizens of (the town of) Marggrabowa of Brandenburg.

(*Litopys Jana Binvil'skoho*, 1<sup>st</sup> half of the 17<sup>th</sup> c.)

- (23) *i toj [...] ot carja temnyka Mamaja*  
 and pron from/by\_PP tsar\_GEN emir\_GEN Mamai\_GEN

*buv vyhnanyj i zabytyj roku 6869 (1361).*  
 COP\_PAST\_MOD-UA force out\_PPP and kill\_PPP year 6869 (1361).

[...i toj na carstvi tatars'kom, zle nabutom, ledve sedm' dnij vybuvšy, **ot carja temnyka Mamaja** *buv vyhnanyj i zabytyj roku 6869 (1361).*]

...and during his illegal reign over the Tatar kingdom that hardly lasted seven days, he was forced out and killed by the tsar-general Mamai in 6869 (1361).

(*Knyha o pobojišči Mamaja, carja tatars'koho, ot knjazja Volodymers'koho i Moskvos'koho*, 16<sup>th</sup> c.)

- (24) *i zostal" ot" nich" pod" Pjatkoju poražonym".*  
 and COP\_PAST\_POL from/by\_PP them\_GEN under Pjatka defeated\_PPP

[Toho ž" roku Kosynskyj voeval" s" poljakamy i zostal" **ot" nich"** pod" Pjatkoju poražonym".]

The same year Kosyns'kyj was at war with the Poles and they defeated him by (the village of) Pjatka.

(*Černihivs'kyj litopys*, early 18<sup>th</sup> c.)



There are also semi-agentive expressions in the shape of od-PP that are ambiguous in reading between the performer of the action and its source, cf.:

- (25) Dano [...] **od xionżencia twerskiego** Witebsk Olgerdowi  
 Given\_NTF from/by\_PP prince\_GEN of Tver\_GEN Witebsk\_ACC Olgerd\_DAT

[Roku 1332. Dano mu w posagu **od xionżencia twerskiego** Witebsk Olgerdowi.]

The prince of Tver gave Olgerd Witebsk into tenure/Olgerd received Witebsk as a tenure from the prince of Tver.

(*Dziele miasta Witebska* (Polish), a 1768 copy)

Less numerous are agent expressions in the instrumental oblique, that however regularly co-occur in periphrastic and participial passives, as well as in *-no*, *-to* construction throughout all the Middle Ukrainian period in the texts we have investigated, cf.:

- (26) i byli koronovany oboe **arcibiskupom hnenžnenskim**  
 and COP\_PAST RU crowned\_PPP both archbishop\_INSTR of Gniezno\_INSTR

i **biskupom krakovskim Boboleju.**  
 and bishop\_INSTR of Krakov\_INSTR Bobolja\_INSTR

[Toho ž' dnja po kreščeniju i po prinjatju sakramentu svjataho Jahejlo vstupil v stan małženskij z Jadvihoju krolewnoju i byli koronovany oboe **arcibiskupom hnenžnenskim i biskupom krakovskim Boboleju.**]

The same day after the ceremony of baptism and the holy communion, Jagiełło entered into marriage with the Queen Jadwiga, and both were crowned by the archbishop of Gniezno and the bishop of Krakov Bobolja.

(*Chronika Lytovs'ka i Žmojts'ka*, mid-16<sup>th</sup> c.)

- (27) Mihalja bito **ljachove.**  
 Mihal beat\_NTF Poles\_INSTR

Mihal was beaten by the Poles.

(*L'vivs'kyj litopys*, 1<sup>st</sup> half of the 17<sup>th</sup> c.)

- (28) Koniecpolskiego poymano **tatarzy**.  
 Koniecpolski caught\_NTF Tatars\_INSTR

Koniecpolski was caught by the Tatars.

(*Dziele miasta Witebska* (Polish), a copy from 1768)

- (29) Ahripina ponjata zo(s)tala [...] **Sepano(m) Sjaha(j)le(n)kom"**,  
 Ahripina taken\_PPP COP\_PAST\_POL Sepan\_INSTR Sjaha(j)le(n)ko\_INSTR

[Ahripina, zavdověvšy po pe(r)vom" mužu svojem" Ilku, ponjata zo(s)tala  
 v(")torobra(č)ne v(") sta(n)" ma(l)ženski(j) **Sepano(m) Sjaha(j)le(n)kom"**, ]

Ahripina, having become a widow of her first husband Ilko, was taken as a wife for  
 the second time by Sepan Sjahajlenko.

(*Akty Poltavs'koho polkovoho sudu*, 1704)

The agents expressed in the prepositional phrases *čerez*-PP and *prez*-PP might be seen as the repercussions of the Polish cognate agent expression in the shape of *przez*-PP. Below is the record demonstrating variation within the domain of overt agentive phrases in a periphrastic passive construction. The agents are expressed with two different means – *prez*-PP and *ot*-PP – and employed side by side in one sentence, cf.:

- (30) kotoraja [...] **prez Batija carja Tatarskoho** [...]  
 which through\_PP Batu\_GEN tsar\_GEN Tatar\_GEN

**byla zburena i rozvalena**,  
 was damaged\_PPP and ruined\_PPP

**a otnovlena i opravlena est'**  
 and renovated\_PPP and repaired\_PPP COP\_PRES\_RU

**ot toho blahočestivoho knjazja Semiona Olelkoviča**  
 from/by\_PP that\_GEN pious\_GEN prince\_GEN Semion\_GEN Olelkovič\_GEN

[...kotoraja to, cerkov' **prez Batija carja tatarskoho** v roku ot sotvorenja světa 6748, a ot Rožestva Christova 1240 **byla z burena i rozvalena, a otnovlena i opravlena est' ot toho blahočestivoho knjazja Semiona Olelkoviča** po lětach nemalych,]

...the church was damaged and ruined by the Tatar khan Batu in the year from the creation of the world 6748, and 1240 from the birth of Christ; it was renovated and repaired many years afterward by the pious prince Semion Olelkovič,

(*Chronika Lytovs'ka i Žmojts'ka*, mid-16<sup>th</sup> c.)

- (31) Kotraja to **prez'' dětok** jest dekljamovana  
That part through\_PP children\_GEN COP\_PRES\_RU declaimed\_PPP

[Kotraja to **prez'' dětok** jest dekljamovana/I dlja utěchi na den' tot z" druku vydana...]

The one that was declaimed by the children/And published that day for joy...

(Christmas poems by Pamva Berynda, 1616)

- (32) **prez'' toho Šjербу** [...] posječonyi [...] Martin' Jurskii  
through\_PP that\_GEN Šjerbina\_GEN slaughtered\_PPP Martin Jurskii

[...**prjez toho Šjербу** i eho ad" hjerjen"tov" posječonyi šljachjet"nyi pan" Martin' Jurskii,]

The honorable Mr. Martin Jurskii was slaughtered by that Šjerbina and his followers,

(*Akty Žytomyrs'koho hrods'koho urjadu*, 1635)

The NTF record below co-occurs with the agent expression in the shape of prez-PP and nominative as object case, cf.:

- (33) nemal' polovina panstva **prez saracinov** pobrano,  
Q half\_NOM\_a-decl kingdom\_GEN through\_PP Arabs\_GEN take\_NTF

[...khdyž jest' velmy potrebnj i juž zničonyj tak, že jemu nemal' polovina panstva **prez saracinov** pobrano,]

...he is really in great need and terribly ruined, since almost half of his kingdom had been conquered by the Arabs...

(*Ystorija o Lystrykijskom, to jest' o razbojničeskom Ferarskom sinode*, 1598)

There are several records of unambiguously agentive čerez-PP attested in our Middle Ukrainian corpus of texts, cf.:

- (34) zabityi zostal" čjerjez rozboinikov"  
 killed\_PP COP\_PAST\_POL through\_PP through\_GEN

...he was killed by the robbers...

(*Akty Žytomyrs'koho hrods'koho urjadu*, 1635)

The u-PP has been attested in the vernacular of the Moscow region, i.e.:

- (35) ržy u menja bylo nasejano poltret'ja zagona  
 rye\_GEN at/by me\_GEN COP\_PAST\_RU sowed\_NTF one third\_GEN pasture\_GEN

[A ržy, g., u menja bylo nasejano poltret'ja zagona,]

I sowed one third of the pasture with the rye, S[ir].

(Letter by the bojar Morozov, 1651)

## 5.5. Variation within the domain of tense marking auxiliaries

The Middle Ukrainian texts exhibit a rich variation within the domain of tense marking auxiliaries. The most widespread tense marking auxiliary is the Russian copula *byt'*, which is also typical of the North Ukrainian dialect. The modern Ukrainian copula *buty* is attested in various text types as well. The same is true for the Church Slavonic aorist and imperfect tensed verbs that are especially frequent in early Middle Ukrainian texts. Another frequent copula type is the Polish copula *zostać*. Besides, there are several copulas like *byv* and *bul* (3<sup>rd</sup> person sg) that can be described as mixed, or contaminated, since they represent a cross-over of various tensed word forms, or the intermediate stages between Russian and Ukrainian, or Ukrainian and Polish forms. There is also a habitative, or existential form of present copula, i.e. *byva*.

The ex below demonstrates the co-existence of Russian/North Ukrainian and Polish tensed verb forms in one sentence, cf.:

- (36) Narimont [...] **byl** **vyzvanyj** na poedinok  
 Narimont COP\_PAST\_RU challanged\_ppp to duel

**zbitym** **zostal** kopiem i **poimanyj**  
 knocked down\_ppp COP\_PAST\_POL spear and caught\_ppp

[Narimont, knjaz' pinskij [...], **byl vyzvanyj** na poedinok ot ednogo nepodloho ricera nemeckoho na ruku sam, a hdy obadva v pole vyčchali, potkalisja kopijami mužne, tam Narimunt s konja **zbitym zostal** kopiem i **poimanyj**.]

Narimont, the prince of Pinsk [...], was challenged to a duel by a noble German knight to fight hand to hand, and when they both went out into the field, they fought bravely with spears; then Narimunt was knocked by a spear down off his horse and taken prisoner.

(*Chronika Lytovs'ka i Žmojts'ka*, mid-16<sup>th</sup> c.)

The Middle Ukrainian periphrastic passives we have analyzed already co-occur with modern Ukrainian copula *buty*; this copula type is especially frequent in Cossack writings and Entertaining fiction, e.g.:

- (37) **vydini buly** na nebi  
 seen\_ppp COP\_PAST\_MOD\_UA on sky

[...nad hradom Varšavoju **vydini buly** na nebi po večoram: mitla, meč, hrob i na nem krest.]

...evenings over the town of Warsaw one could see in the sky a broom, a sword, and a coffin with a cross on it.

(*Litopys Samijla Velyčka*, early 18<sup>th</sup> c.)

The modern Ukrainian copula *buty* has been also (infrequently) attested in administrative formulas of court files of early 17<sup>th</sup> c., cf.:

- (38) aby        **bula** [...]        **prinjata** [...]  
 so that\_C COP\_PAST\_MOD\_UA accepted\_PPP

[...aby **bula** do knih" **prinjata** i upisana.]

...in order it be put into records and registered.

(*Akty Žytomyrs'koho hrods'koho urjadu*, 1635 )

The ex below demonstrates the co-existence of the modern Ukrainian copula *buty* and the Polish overt copula *zostać* in one sentence, cf.:

- (39) daby [...] šableju    žyvot moj **buv**                    **dokončen**  
 so that\_C by sword life    my COP\_PAST\_MOD\_UA ended\_PPP

i    hlava moja [...] **zostala**        **otlučena**  
 and head my        COP\_PAST\_POL cut off\_PPP

[A jesli by ináč milo dijatysja z storony mojeji, ku škodi jeho hans'koj mylosti, to dopusty na mja, bože, toje, daby tojeju ž šableju žyvot moj **buv dokončen** i hlava moja ot tilese mojeho **zostala otlučena**.]

But if I did change my mind, and try bring mischief to his Majesty the khan, the Almighty should allow my life be terminated by this very sword and my head be cut off my body.

(*Litopys Samijla Velyčka*, early 18<sup>th</sup> c.)

The Russian/North Ukrainian copula in the past tense has also been attested in its habitative existential form, and is especially frequent in trial records, cf.:

- (40) onaja saha [...] **byvala**                    zavše **hačena**  
 that lake COP\_PAST\_RU\_HABIT always dam\_PPP

[...onaja saha po(d) čas" hače(n)ja hreblě **byvala** zavše **hačena**.]

...that lake was always dammed whenever the mill was dammed.

(*Akty Poltavs'koho polkovoho sudu*, 1700)

In the 3<sup>rd</sup> person singular the Polish copula *zostać* has been attested either with a Ukrainian -v desinence or with the typical -l desinence, cf.:

- (41) **zabytyj zostav** ot Frjah  
murdered\_PPP COP\_PAST\_SEMI-UA by Italians

[...prybih do horodu, nad morem ležačoho, Kafy tam zatajiv im'ja svoje, ale pozvanyj, **zabytyj zostav** ot Frjah zle žyvot skončyv.]

...he hastened into the town Kafa lying on the seashore, stayed there incognito, but, being recognized, he was murdered by the Italians; he ended up pretty bad.

(*Knyha o pobojišči Mamaja, carja tatars'koho, ot knjazja Volodymers'koho i Moskvos'koho*, 16<sup>th</sup> c.)

- (42) kohda Chmel'nyc'kyj [...] **zostal uvidomlen**  
when Chmel'nyc'kyj COP\_PAST-POL informed\_PPP

[...kohda Chmel'nyc'kyj ot nikotorych znajemych murz **zostal uvidomlen**,]

...when Chmel'nyc'kyj was informed by some of his morzalar acquaintances,

(*Litopys Samijla Velyčka*, early 18<sup>th</sup> c.)

There is a contaminated copula *bul*, representing a cross-over of the Russian copula *byl* and the Ukrainian copula *buв*, cf.:

- (43) sejm **bul zloženyj**  
sejm COP\_SEMI-MOD-UA gathered\_PPP

[V tom že roku po svjatom Marcyni sejm **bul zloženyj** storony tych rečyj, ščo na Ukrajinі kozacy počynyly, bo hotily znovu kozakov znosyty.]

The same year after the St. Martin's Day the sejm was gathered to handle the damage caused by the Cossacks in the Ukraine, and they once again wanted to dissolve the Cossacks.

(*L'vivs'kyj litopys*, 30s-40s of the 17<sup>th</sup> c.)

Another contaminated copula we came across with is *byv*, representing one more cross-over of the Russian copula *byl* and the Ukrainian copula *buv*, cf.:

- (44) **byv''**                      **zaprošonyi**  
 COP\_SEMI-MOD\_UA   invited\_PPP

[Tam" žje, byv"šy v kostele, mšy svetoe vysluchav"šy **byv'' zaprošonyi** ōd eho ml pana Hanskoho, deržavcy vil"skoho, na ōbed" do zamku.]

Having listened to the holy mess, he was invited right there in the church by Mr. Hanski, the head of Vilna, to dine in the castle.

(*Akty Žytomyrs'koho hrods'koho urjadu*, 1635)

Both periphrastic passives and *-no*, *-to* forms have also been attested with the Russian copula in the present tense, which is especially typical of the religious polemics of late 16<sup>th</sup> and early 17<sup>th</sup> c., e.g.:

- (45) **esi**                      **rozbit'**  
 COP\_PRESENT\_RU   ruined\_PPP

[Vidiš li, jak **esi rozbit'** ot toho rozbojnika, kotorij v dubrově sja kryet i na mohilu často vzběhaet, vyhljadujuči,]

Don't you see, that you have been ruined by a robber that is hiding himself in the oak woods, often running up the hill, lurking around,

(*Knyžka* by Ivan Vyšens'kyj, 1599-1600)

Canonical passive in Middle Ukrainian texts has also been attested with present Polish copula, cf.:

- (46) **Jestes'**                      **očarovana**  
 COP\_PRESENT\_POL   enchanted\_PPP

[**Jestes' očarovana** i zamok tvoj, i dyjavoly za toboju javno chodjat'.]

You and your castle are enchanted, and the devils are dogging your steps.

(*Ostroz'kyj litopysec'*, early 17<sup>th</sup> c.)



- (47) **ošukany(j) jestem''**,  
deceived\_ppp COP\_PRES\_POL

[...poneva(ž) o(d) svojej zavodci, kotoraja mně prodala tam" khrunt", **ošukany(j) jestem''**,]

...since I have been deceived by my agent, who sold me that piece of land.

(*Akty Poltavs'koho polkovoho sudu*, 1699)

Infrequently, to designate the 2<sup>nd</sup> person plural, parallel to the Russian/North Ukrainian copula in the future tense *budem*, there is also the modern Ukrainian future copula *budemo*, that might co-occur in one text, cf.:

- (48) osuždeny i v heenu **vverženy budemo**  
condemned\_ppp and into gehenna precipitated\_ppp COP\_FUT\_UA

[A esli by my pohrešili v čom, [...] osuždeny i v heenu **vverženy budemo...**]

But if we sin, [...] we will be condemned and precipitated into gehenna...

(*Knyžka* by Ivan Vyšens'kyj, 1599-1600)

- (49) **postavleni budem**  
condemned\_ppp COP\_FUT\_RU

[...da ne **postavleni budem** z našeho nyněšneho žitija bezplodiem pred onym strašnym i neliceměrnym sudieju.]

...so that at the end of our life we would not appear barren before the frightful and sincere judge.

(*Knyžka* by Ivan Vyšens'kyj, 1599-1600)

There is also a bizarre three-constituent agreement model attested in the administrative records, consisting of two copulas and a passive past participle, cf.:

- (50)    **sut**                      **ōb''varovanye stanuli**  
          COP\_PRES\_RU   used\_PPP                      COP\_PAST\_SEMI-POL\_HABIT

[...ne rjespjektujući na prava in''cere kostintucye, kotorymi dobra zemskie šljacheckie **sut ōb''varovanye bezprav''ne khvaltov''ne stanuli**,]

...not respecting the Constitutional rights, which were used to illegally and fiercely support the zemstvo property of noblemen,

(*Akty Żytomyrs'koho hrods'koho urjadu*, 1635 )

## 5.6. Nominative as object case

Nominative as object case is generally believed to be restricted to the Eastern Slavonic language variety<sup>103</sup>. Still, it is not clear whether this phenomenon historically was restricted to certain dialect(s) or was typical of the Common Eastern Slavonic in general. There are records of nominative as object case on *-no*, *-to* predicates attested in the Old Eastern Slavonic language variety, namely in Laurentian Codex (1377), cf. *poručeno*<NTF> *že byst' jemu straža*<NOM\_a-decl> *mor'skae*<NOM\_a-decl> (Karskij 1962, 68)<sup>104</sup>. The same record with non-agreeing *-no*, *-to* has been attested in Primary Chronicle as well, which is cited by Sprinčak (1960), cf. *poručeno*<NTF> *že byst' emu straža*<NOM\_a-decl> *mor'skaja*<NOM\_a-decl> (101). The 15<sup>th</sup> c. and 16<sup>th</sup> c. chronicles in our corpus of texts reproduce this sentence with agreeing participles, i.e. *Poručena*<PPP\_fem> *že na bě emu straža*<NOM\_a-decl> *mor'skaja*<NOM\_a-decl> (*Nykyforivs'kyj litopys*, late 15<sup>th</sup> c.); *Poručena*<PPP\_fem> *že emu byst' straža*<NOM\_a-decl> *mor'skaja*<NOM\_a-decl> (*Suprasl's'kyj litopys*, early 16<sup>th</sup> c.). Such substitution of *-no*, *-to* predicates headed by nominative with periphrastic passives by later scribes speaks for the vernacular status of *-no*, *-to* with nominative.

<sup>103</sup> here are, however accounts, like Doros (1975) claiming that nominative in the structure of *-no*, *-to* predicates was also attested in Polish diachronically, e.g. *jace czso Miculayowi wina o kon* (101). In contrast to Doros (1975), Brajerski (1995) rejects to recognize the noun *wina* in this ex as nominative plural, arguing that one should interpret *wina* as *winę*, since nasal vowels have apparently often been marked with the vowel „a“ in Old Polish texts (476).

<sup>104</sup>Karskij (1962) comments this ex as follows: „In some grammatically personal sentences, the connection between the subject and the predicate is extremely weak, the result of which is the absence of standard agreement“ (68).

Reflecting on the possibility of nominative as object case in Polish historically, Brajerski (1995, 475) introduces an ex from *Historia Aleksandra* (1510): *...a przetho puszcz nasz, bo bądzyc thwoya chwąła obyavy[o]no<NTF> przeth nym przesznasz*. Brajerski (1995) observes that the ex above can be interpreted either as a construction with structural accusative, i.e. *będzie twoją chwałę objawiono<NTF>*, or as a structure with nominative case marking, i.e. *będzie twoja chwala objawiono<NTF>*. Moreover, Brajerski (1995) does not exclude the possibility of a misprint, that is the form *obyavyno* might have been used instead of the agreeing form *obyavyona*. Brajerski (1995) rejects the first variant with accusative, on the ground of a philological assumption that the structural accusative cannot surface in a passive structure. Since the ex is taken from *Historia Aleksandra* (1510), a text that contains a lot of Russian lexemes, e.g. *doczka*, *oziero*, *bolszy*, Brajerski (1995) takes it for likely that the structure *thwoya chwąła obyavy[o]no<NTF>* has nominative as object case. The structure is then equivalent to Russian dialectal constructions of the type *poznano<NTF> budiet prawda* (476). There is one more *-no*, *-to* ex, from *Biblia Gdańska*, that Brajerski (1995) qualifies as possibly one with nominative object case in the structure, cf. *...i nie ukaże się u ciebie nic kwaszonego, ani widziano będzie kwas we wszystkich granicach twoich...* (475).

Clear cases of nominative as object case, that is the ones with an *a*-declension noun NPs, co-occurring with standard accusative NPs, are attested in the trial records of the Luc'k Castle book, written in North Ukrainian dialect, or more precisely, in its Western-Polissian language variety:

- (51)   ōtnęto   v   nego **sermęgu**,   **šapku**       i   **sokiru**  
          take\_NTF by him coat\_ACC\_a-decl cap\_ACC\_a-decl and axe\_ACC\_a-decl

[Tot imenoval škody svoee•, iž pri tom boju na tot čas ōtnęto v nego **sermęgu**, **šapku** i **sokiru**•. ]

He listed his lost property, that is a coat, a cap and an ax were taken from him in that battle.

(*Luc'ka Zamkova Knyha*, 1561)

- (52) v nego ōtněto kožuch, šapka i sokira  
by him take\_NTF fur-coat\_ACC/NOM\_m cap\_NOM\_a-decl and axe\_NOM\_a-decl

[Na Jakovu Vareice rana v holově bitaja kryvavaja i menoval škody svoee, iž v nego ōtněto kožuch, šapka i sokira•.]

Jakov Vareica has a compound bloody wound on his head, and he enumerated his lost property, namely, he was robbed a fur-coat, a cap and an ax.

(*Luc'ka Zamkova Knyha*, 1561)

Sometimes nominative as object case co-occurs with standard accusative as object case in the same clause, cf. the record below:

- (53) vzěto [...] sedlo, ōpanču, koc,  
take\_NTF saddle\_NOM/ACC\_n cloak\_ACC\_a-decl coat\_NOM/ACC\_m\_inan

sahaidak, sable, rohatina•  
quiver\_NOM/ACC\_m\_inan sword\_NOM\_a-decl bear-spear\_NOM\_a-decl

[I v tot, dei, čas pri tom boju vzěto v nego tye vsi penezi činšovye i serebščiznye pětideset kop hrošei, k tomu koně, sedlo, ōpanču, koc, sahidak, sable, rohatina• i inšich reči nemalo.]

In the battle he was deprived of all his money for the rent, fifty kops, as well as of a horse, a saddle, a cloak, a coat, a quiver, a sword, a bear-spear and of many other things.

(*Luc'ka Zamkova Knyha*, 1561)

- (54) nagrouženo v nich" smola želězo  
loaded\_NTF in them resin\_NOM\_a-decl iron\_NOM/ACC\_m\_inan

[V I m čísle prišli sjuda D karablja svěiskich" a nagrouženo v nich" smola želězo a iz inych" odin" svěiskoi korabl' s mědnymi pouškami v podarok" prislan" ego korolevskomou veličestvou.]

On the 10<sup>th</sup> day of the month 4 Swedish ships came, loaded with resin and iron; one

Swedish ship with copper cannons was sent as a gift to his Majesty the King.

(*Vesti Kuranty*, 1664)

- (55) **polovina** kormov ich" davano  
half\_NOM\_a-decl provisions their given\_NTFI

[po se vremja **polovina** kormov ich" davano a to iměet" byt' do posłědnego čisla  
sentjabrja,]

half of the provisions has been given out up to now, which should suffice till the end  
of September,

(*Vesti Kuranty*, 1667)

- (56) Poslano k tebe **gosudareva** **gramota**  
sent\_NTF to you of His Majesty letter\_NOM\_a-decl

His Majesty sent you a letter,

(Letter by the boyar Morozov, 1660)

Nominative as object case has also been attested in personal sentences in North Ukrainian language variety as well:

- (57) videl esmi **hrebļę** **dobra** i mlyny dobry  
saw to be\_AUX dam\_NOM-a-decl fine\_NOM-a-decl and mill\_ACC/NOM\_pl\_inan fine\_ACC/NOM\_pl\_inan

[A potom" byl esmi na hrebli mlynovskoi i ou mlynech i videl esmi **hrebļę dobra** i  
mlyny dobry, ōdno kamenja i naćinja mlynovoho nemaš. ]

Afterwards I was on the mill dam and in the mills, and I corroborated that the dam was  
good and the mills were fine, the only thing that was missing were stones and utensils.

(*Luc'ka Zamkova Knyha*, 1561)

Nominative as object case occurs in later texts, such as the 18<sup>th</sup> c. diaries from Central Ukraine as well, e.g. in the diary of the General Cornet Nikolaj Chanenko, cf.:

- (58) vzjato u Kiselka **kon'** i **kobylka**  
 take\_NTF by/from Kiselek horse\_ACC/NOM\_m\_inan and mill\_NOM\_a-decl

[Rano odtol' viechavšy, obědal" v" Slučku i tam" za skopščinu vzjato u Kiselka **kon'** i **kobylka**.]

Having left the place early, I dined in Sluc'k, and Kiselko gave me a horse and a young mare to pay for his land rent.

(*Dnevnikъ heneral'nahô choružaho Nikolaja Chanenka*, 1733)

- (59) kupleno bljudco i **talěrka** cěnovye za 40 k.  
 buy\_NTF dish\_ACC/NOM\_n and plate\_NOM\_a-decl tinned for 40 k.

[...u krestjanina Efima Vasylieva kupleno bljudco i **talěrka** cěnovye za 40 k.]

A tinned dish and a tinned plate were bought from the peasant Efim Vasylijev for 40 k.

(*Dnevnikъ heneral'nahô choružaho Nikolaja Chanenka*, 1733)

- (60) poslano [...] šest' kožyc" baranich" i **plachta**  
 send\_NTF Q skins of sheep and skirt-sheet\_NOM\_a-decl

[...poslano črez" Judenka šest' kožyc" baranich" i **plachta**,]

...six sheep skins and a skirt-sheet were sent with Judenko.

(*Dnevnikъ heneral'nahô choružaho Nikolaja Chanenka*, 1742)

- (61) dano budet v četvertjach bol'saja **dača**  
 given\_NTF will\_be\_AUX\_fut in closer large cottage\_NOM\_a-decl

[A budet komu pomest'e dano budet v četvertjach bol'saja **dača**,<sup>105</sup>]

If somebody gets an estate, he will be give a large enclosed cottage,

(*Sobornoe ulozenie*, 1649)

Additionally, there is nominative as object case in infinitival construction attested in Middle Polish language variety, akin to its North Russian counterpart, cf.:

<sup>105</sup> This ex is ambiguous, since it is not clear whether the NTF *dano* refers to the first clause or to the second clause.

- (62) **Dzwonica bracka zaczęto murować**  
 belfry\_NOM\_a-decl of-brotherhood\_NOM\_a-decl start\_NTF build\_INF

[Roku 1657. **Dzwonica bracka**, której fundamēt był wywiedziony przed tym, a w oblężenie dla bronięcia się był rozebrany, **zaczęto murować**.]

The year 1657. One started to build the Belfry of Brotherhood, whose foundation had been constructed in advance, but it was disassembled for safety reasons during the siege.

(*Mohylevs'ka chronika* (Polish), 1742)

Nominative as object case also appears in the structure of infinitive with a participle in agreement with its head noun, cf.:

- (63) **dzwonica bracka zaczęta murować**  
 belfry\_NOM\_fem\_a-decl of-brotherhood\_NOM\_fem\_a-decl start\_PPP\_fem\_a-decl build\_INF

[Tegoż roku **dzwonnica Pokrowska zaczęta murowac**, a skączona roku 1698.]

The same year one started to build the Belfry of Brotherhood, which was finished in 1698.

(*Mohylevs'ka chronika* (Polish), 1742)

Nominative as object case has also been attested in *-no*, *-to* construction in contaminated Polish texts, that is in pieces written on the territory of today's Ukraine or Belorussia, cf.:

- (64) **Moskwa pot Orszą pobito**  
 Moskow\_NOM\_a-decl under Orsha kill\_NTF

[**Moskwa pot Orszą pobito** pot lati bożego naro[dzenia] tisiąc pięćset dziewiątego [1509].]

Muscovites were defeated by Orsha, in the year of the Lord fifteen hundred and nine [1509].

(*Wielkiego xięstwa Litewskiego i Zmodskiego kronika* (Polish), 16<sup>th</sup> c)

## 5.7. Non-canonical, disrupted and loose agreement

There is also an ex of accusative assigning *-no*, *-to* predicates related to the pronominal phrase in nominative, even though it is generally claimed in literature that the structural nominative cannot surface in the subject position of *-no*, *-to* predicates neither historically nor synchronically. The *-no*, *-to* predicates in the ex below function as an active finite verb.

- (65) **[nie] wiedziec kto pisma pisano**  
 not knowing who\_NOM\_PRON letters\_ACC/NOM\_pl\_inan write\_NTF

[Tak w Koronie P[olskiej] y w W[ielkim] X[ięstwie] Lit[ewski]m, y po różnych krajach y miastach, y w Mohylowie **[nie] wiedziec kto pisma pisano** czerwoną kretą po kościołach y [cer]kwiach tak wysoko, że na kilka sążniow wzwyż, w skrzy[nia]ch za zamkami, co żaden tego pisma przeczytać nie mógł.]

This way in the Polish Crown and in the Great Duchy of Lithuania, and in various lands and towns, as well as in Mohyliv, an unknown person was writing messages with a red chalk in Roman-Catholic churches and in Orthodox churches at the height of several sazhen, in the enclosed areas, so that it was impossible to read those messages.

(*Mohylevs'ka chronika* (Polish), 1742)

In similar vein, the *-no*, *-to* record below occurs with a direct object complement that is contextually the core argument, or the subject of the clause. From the overall meaning of the sentence, the *-no*, *-to* form makes an impression to function as a gerundial adjunct.

- (66) **Bo ten Giedymin poluiono po puszczy**  
 Since that\_NOM\_pron Gediminas\_NOM\_name hunt\_NTF along dense

**zabił sztuki wielkiey straszego żubra**  
 killed\_PAST\_PERS animal huge terrifying bison

[Roku 1323. Giedymin xionże zaczął sie fundować, wystawił miasto Wilno, oto przez taki sposób. **Bo ten Giedymin poluiono po puszczy** na tym mieyscu, gdzie Wilno stoy, **zabił sztuki wielkiey straszego żubra** i w polowaniu swoym zanocował w



puszczy na Łysej gorze.]

Year 1323. The prince Gediminas started his construction works and built up the town of Vilnius as described below. The thing is that Gediminas killed a huge terrifying bison while hunting in the dense forest on the same place where Vilnius is now situated, and, after the hunting, he spent the night on the Lysa Hora.

(*Dziele miasta Witebska* (Polish), 1768)

Further exx for the hybrid argument structure with nominative arguments that designate the doer of the action in the structure of *-no*, *-to* predicates<sup>106</sup> are below:

- (67)     **ktorego**             **spotykano** **duchowieństwo** **z**     **processyami** **magistratt**  
              whom\_ACC\_m\_anim   meet\_\_NTF     clergy\_NOM\_n\_sg     with processions     magistrate\_NOM\_m\_in
- cały**     **a**     **osobliwie** **kupiecka**                     **y**     **mieska**             **młodz**  
              whole and notably     of-merchant\_NOM\_a-decl     and of-town\_NOM\_a-decl     youth\_NOM\_no-a-decl

[Tegoż roku 1699. Przed bożym narodzeniem pożądaný kleynot Białey Rusi j[ego] m[os]c Serafion Połochowski, episkop mscisławski, orszański y mohylowski, archymandryta słucki, namiesnik metropolij Kijowskiego y Konstantynopolskiego tronu, szczęśliwie przybył do Mohylowa, **ktorego spotykano duchowieństwo z processyami, magistratt cały sami, a osobliwie kupiecka y mieska młodz**, z chorągwią izby kupieckiej, konno y rządu z niemałą assistencyą w kilkaset koni.]

The same year 1699. Before Christmas the bearer of honors of the White Rus', his Majesty Serafion Połochowski, the bishop of Mstislav, Orsha and Mohylow, the archbishop of Sluc'k, the head of the Kiev metropolis, and the heir to the throne of Constantinople, successfully arrived in Mohylow; he was met by the procession of clergy, by all magistrate members in person, and particularly cordially by the merchant and town youth, with the flags of merchant chamber, on horseback and in rows, with several hundreds of horses involved.

(*Mohylevs'ka chronika*, 1742)

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<sup>106</sup> The doer of the action in *-no*, *-to* can usually be expressed only in the oblique by-phrase.

Another related ex of two core arguments, one in the subject position in nominative, and another in the direct object position in accusative in the structure of *-no*, *-to* is below:

- (68) **Witeblane,**                      **z**    **moskwo**    **utarczke**    **maiono**  
 Citizens of Witebsk\_NOM\_pl with Moskovites fight\_ACC\_a-decl have\_NTF

[Roku 1614. **Witeblane**, z moskwo **utarczke maiono** w Hłozowiczach; moskwa witeblan pobiła.]

Year 1614. The citizens of Witebsk had a fight with the Muscovites in Hłozowiczy; Muscovites defeated the citizens of Witebsk.

(*Dziele miasta Witebska* (Polish), a 1768 copy)

There are various types of disrupted agreement attested in the texts. A quantifier seems to have been one of the triggers of loose agreement, since it is historically attested with both singular and plural agreement. The quantifier NP has been encountered in disagreement with both auxiliary and passive past participle<sup>107</sup>, cf.:

- (69) **mnoho ich**        **plačom** **byli**        **porušony**  
 Q        them\_GEN by cry COP\_PAST\_PL moved\_PPP\_PL

[Tam že byla instrukcija poselstv, čitanych zo vsich zeml' i povetov zemli Volynskoe, s Podolja, s Podhorja, z Rusi, iz Litvy, ze Lvova, s Kieva, s Premyšlja, s Pinska, že **mnoho ich** plačom **byli porušony**,]

The instruction on settlements was there as well, which was read out loud in all lands and counties of Volynia, Podolia, Podgorje, Rus', Litva, Lvov, Kiev, Premyšl, Pinsk; it was reported that many of them were crying.

(*Barkulabivs'kyj litopys*, 17<sup>th</sup> c.)

<sup>107</sup>Related ex of non-agreement between a passive past participle and the auxiliary in Polish is quoted in Brajerski (1995), who introduces an ex from early 1600s, cf. *wielkość chorągwi i ludzi [Turków] nad nasze szańce jako chmura poszła, ale łatwiej takimi sposobem od wypadających naszych w pole zrażeni byli i [zrażone też były] kosze, które już były porąbano* (*Dziennik* 1621, cited in Brajerski 1995, 476).

Similar cases of non-canonical, or loose agreement are attested with reflexives and in personal clauses, cf.:

- (70) **mnoho horodov peredalosja byli**  
 Q towns\_GEN went over\_REFL\_SG COP\_PAST\_PL

- (71) **moskva byla osěli**  
 Moscow\_NOM\_a-decl COP\_PAST\_SG conquered\_PAST\_PL

[I mnohie ljudi pristali k nemu i **mnoho horodov peredalosja byli** k Moskvě: knjaz' Michailo Mstislavič i z horodom svoim Drutckim, i Ršu, i Kričov, i Mozyr **moskva byla osěli**.]

Many people went over to him, and many towns joined Moscow: the prince Michailo Mstislavič with his town Drutck, Rša, Kričov, and Mozyr were conquered by Moscow.

(*Jevrejinovs'kyj litopys*, 17<sup>th</sup> c.)

Moreover, there are several cases of disrupted, or non-canonical agreement with auxiliary *bylo* attested in personal sentences, cf.:

- (72) **bylo kometa velykaja**  
 COP\_PAST\_N\_SG comet\_NOM\_a-decl big\_NOM\_a-decl

[Toho ž roku **bylo kometa velykaja**, tryvala dnij 18 m(isja)cja maja na vschod slonca.]

There was a huge comet the same year, which was visible at sunrise 18 days during the month of may.

(*Litopys Binvil's'koho*, 17<sup>th</sup> c.)

Related cases of disrupted agreement with the auxiliary have been also attested in the infinitival structures, cf.:

- (73) **bylo**                **potreba**            **potjahnuty** ostruju šablju,  
 COP\_PAST\_N\_SG   need\_NOM\_a-decl   pull\_INF       sharp   sword

[A na takoe pyśanie znovu **bylo potreba potjahnuty** ostruju šablju,]

It was necessary to pull out a sharp sword to respond to such a message.

(*Litopys Bynvil's'koho*, 17<sup>th</sup> c.)

### 5.8. Co-existence of old nominative-accusative and new genitive-accusative forms

The old nominative-accusative forms in place of structural accusative are oscillating with the new genitive-accusative forms, cf.:

- (74) prynuždeny ljachi        **sobaki**                i        **koški** [...]        istry  
 must                Poles\_NOM   dogs\_NOM/ACC\_PL   and   cats\_NOM/ACC\_PL   eat\_INF

**pacjukyv''**,   **myšej**,                **ižakov''**,                **žab''**, [...]        povyidaty musěli  
 rats\_GEN/ACC\_PL   mice\_GEN/ACC\_PL   hedgehogs\_GEN/ACC\_PL   frogs\_GEN/ACC\_PL   eat\_INF        had to

[...až" prynuždeny ljachi **sobaki** i **koški** i proče sťerwo istry i navet" **pacjukyv''**, **myšej**, **ižakov''**, **žab''**, **hadjuk''** i **usjaku nečyst'** do ščentu povyidaty musěli...]

...the Poles were forced to eat dogs, cats and similar stuff, and they even had to eat up rats, mice, hedgehogs, frogs, and all the dirty vermin.

(*Lyzohubivs'kyj litopys*, 1742)

## 5.9. Formation from perfective, imperfective and iterative verb stems

While it is claimed in literature, that *-no*, *-to* predicates in modern Ukrainian are formed almost exclusively from the perfective transitive verb stems, diachronically *-no*, *-to* forms are formed from imperfective verb types as well, cf.:

- (75) Tut"                    že        **pytano**        Herasyma,  
immediately PART ask\_NTF\_IMPF Herasym

They asked Herasym immediately,

(*Akty Poltavs'koho polkovoho sudu*, 1698)

- (76) Zamok **budovano**\_IMPF Jaroslavs'kyj i Domšu,  
Castle build\_NTF\_IMPF of Jaroslavs'k and Domša

They built the Jaroslavs'kyj castle and Domša,

(*L'vivs'kyj litopys*, 30-40s of the 17<sup>th</sup> c.)

- (77) vse tohda ž        **šacovano**        na try al'bo j        čtyry tysjači levov  
all then PART estimate\_NTF\_IMPF with three or even four thousand lev

...all that was estimated with three or even four thousand lev.

(*Litopys Samijla Velyčka*, early 18<sup>th</sup> c.)

NTF in Middle Ukrainian can also be formed from iterative verbal stems, either perfective or imperfective, cf.:

- (78) Ustavil tež, žeby v kostelach šljuby **davano**,        a ne v domech.  
order also C in churches marriages give\_NTF\_IMPF\_ITER but not in houses

He ordered, that the ceremony of marriage be conducted in the churches, not at home.

(*Litopys Jana Bynvil's'koho*, 1<sup>st</sup> half of the 17<sup>th</sup> c.)

## 6. Quantitative analysis and graphical display of the obtained data

### 6.1. Middle Ukrainian literary texts [1,010,223 tokens]

#### 6.1.1. Ruthenian chronicles approx. late 1400s–1600s [14 texts; 307,005 tokens]<sup>108</sup>

Lithuanian-Ruthenian chronicles, also known as West-Russian and Belorussian-Lithuanian chronicles are partly historical, partly literary writings that originated in the Grand Duchy of Lithuania in the 15<sup>th</sup> and 16<sup>th</sup> century. Čyževs'kyj (1997) does not regard them as literary pieces, arguing that they predominantly impart dry factual information; the artistically composed passages he interprets as separate monuments incorporated into the chronicles in later periods. The majority of compilations has survived in later manuscripts. The language employed varies from the Church Slavonic of Ruthenian recension encountered in the chronicles of the princely era to the bureaucratic language of the Middle period (234). Although put under the same umbrella term on the ground of their territorial affiliation, these texts manifest heterogeneous linguistic features that will be exemplified in the course of this study. We have selected 14 chronicles written in a language variety that in our view incorporates, in varying proportion, Ruthenian, Polish and Church Slavonic lexical and morpho-syntactic elements.

In the late 15<sup>th</sup>-early 16<sup>th</sup> c. text *Chronika Lytavs'ka j Žmojs'ka*, the CP (111) and PPP (42) slightly prevail over NTF records (87 with object case, 11 without any object case). The chronicle contains 5 exx of NTF with unambiguous accusative case, i.e. with an *a*-declension noun in the NP, cf. *bo šyju*<ACC\_a-decl> *emu utjato*<NTF\_cut off>; *zaslonu*<ACC\_a-decl> *otsloneno*<NTF\_withdraw>; *dano*<NTF\_give> *ej stanciju*<ACC\_a-decl>; *pryneseno*<NTF\_bring> *novynnu*<ACC\_a-decl>. There are 17 cases of NTF with mask anim in the NP, several of them are formed from imperfective verb stems, i.e. *pana*<ACC\_m\_anim> *jakoho paleno*<NTF\_burn>; *mistra*<ACC\_m\_anim> *im zabito*<NTF\_kill>; *eho*<ACC\_m\_anim> *tam rychno poznano*<NTF\_recognize>; *zaraz biskupa*<ACC\_m\_anim> *dano*<NTF\_give>; *hdy ego*<ACC\_m\_anim> *do Vitolda privedeno*<NTF\_bring>. There are 14 cases of NTF with mask inan or neut in the NP, that can however be personal clauses, since they have endings syncretic between nominative and accusative, e.g. *Podol'je*<ACC/NOM\_n\_sg> *znovu do Litvy*

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<sup>108</sup>*Akademičnyj litopys* [Academic Chronicle], 9,769 tokens; *Barkulabivs'kyj litopys* [The Chronicle of Barkulabovo], 16,574 tokens; *Chronika Bychovcja* [Bychovec' Chronicle], 37,665 tokens; *Chronika Lytavs'ka j Žmojs'ka* [Lithuanian and Samogotian (Žemaitijan) Chronicle], 93,073 tokens; *Jevrejinovs'kyj litopys* [Jevrejinovs'kyj Chronicle], 19,880 tokens; *Litopys Archeolohičnoho tovarystva* [Archeological Society Chronicle], 9,255 tokens; *Litopys Krasyns'koho* [Krasyns'kyj Chronicle], 13,819 tokens; *Litopys Račyns'koho* [Račyns'kyj Chronicle], 22,042 tokens; *Nykyforivs'kyj litopys* [Nykyfor Chronicle], 15,050 tokens; *Rum'ancevs'kyj litopys* [Rum'ancev Chronicle], 17,159 tokens; *Sluc'kyj litopys* [Sluc'k Chronicle], 13,882 tokens; *Suprasl'kyj litopys* [Suprasl' Chronicle], 26,643 tokens; *Vilens'kyj litopys* [Vilna Chronicle], 4,655 tokens; *Volyns'kyj korotkyj litopys* [Volyn' Short Chronicle], 7,539 tokens.

*otnjato*<NTF\_take away> *u poljakov*; *Hrekom dano*<NTF\_give> *meškane*<ACC/NOM\_n\_sg>. There are 20 exx of NTF with pl anim in the NP, i.a. formed from imperfective verb-stems, cf. *bojar*<ACC\_pl\_anim> *znamenitých paleno*<NTF\_burn\_impf> *mertvých*; *druhich*<ACC\_pl\_anim> *po roznych zahonach imano*<NTF\_catch\_impf>; *z vjazenja vsěch*<ACC\_pl\_anim> *vypuščeno*<NTF\_release\_pf>. NTF also occurs with quantifiers/numeral phrases/numeral-like nouns in the NP (12), i.e. *i mnoho*<Q> *ich potom najdovano*<NTF\_find\_iter\_pf>; *množestvo*<Num-like\_noun> *pobito*<NTF\_beat\_down\_pf> *sozdanija božija*. NTF construction is also attested with partitive genitive NP (5), cf. *z harmat dano*<NTF\_give> *ohnju*<GEN\_part>; *davano*<NTF\_iter\_give> *po oboch zamkach i po valju měskom ohnju*<GEN\_part> *z harmat*. NTF construction in this chronicle does not occur with any copula type but with past ru copula (4), and only in the environment ambiguous between accusative and nominative, or with genitive of negation in the NP, i.e. *A hdy ljudu po dvěstě*<Num> *do bašt puščeno*<NTF\_let\_in\_impf> *bylo*<AUX\_past\_ru>; *i do hetmana privedeno*<NTF\_bring\_pf> *bylo*<AUX\_past\_ru> *samych dětej bojarskich o dvěstě*<Num>; *i aby uže trupov mertvých*<GEN\_neg> *ne bylo*<AUX\_past\_ru> *paleno*<NTF\_burn\_impf> *indej, tylko tam*. NTF occurs with prez-PP (2): *A tak Lucko i Volyn' ves' prez toho ž Kirděja*<Prez-PP> *znovu bylo*<COP\_past\_ru> *Litvě priverneno*<NTF\_give\_pf>; *bo im pred tym prez Jahejla i Vitolta*<Prez-PP> *bylo*<COP\_past\_ru> *podano*<NTF\_give\_pf> *i věčno zapisano*<NTF\_write\_pf> (no NP; NP retrievable). Both prez-PP records co-occur with the copula. The PPP/CP manifest 3 types of by-phrases. The most numerous one is ot-PP (38), i.e. *ot mužyka sokěroju zabityj*<PPP\_kill\_pf>. There is 1 ex of instrumental of agent, i.e. *i byli koronovany*<PPP\_crown\_impf> *oboe arcibiskupom hnenžnenskim*<INST> *i biskupom krakovskim Boboleju*<INST>; and 2 exx of prez-PP, cf. *cerkov' prez Batyja carja tatarskoho*<Prez-PP> [...] *byla zburena*<PPP\_plunder\_pf> *i rozvalena*<PPP\_destroy\_pf>; *i otvezen*<PPP\_take\_away\_pf> *počtively do Krakova prez pany koronnye i litovskie*<Prez-PP>. Unlike NTF that has been scarcely attested with past ru copula only, PPP/CP occurs with present ru copula (23), e.g. *Jan Hus i Heronim spaleny*<PPP\_burn\_pf> *sut'*<COP\_pres\_ru>; future ru copula (2), i.e. *poslan*<PPP\_send\_pf> *budet*<COP\_fut\_ru>; past ru copula (69), i.e. *chvalena*<PPP\_praise\_impf> *byla*<COP\_past\_ru> *ot ljudij prostých za bohinju*; poln past *zostać*-copula (14), e.g. *ot volochov zostal*<COP\_past\_pol> *rozsěčenym*<PPP\_cut\_up\_pf>; and aorist copula (3), i.e. *ubien*<PPP\_kill\_pf> *byst'*<COP\_aorist> *Michail*.

In the 17<sup>th</sup> c. *Chronika Bychovcja* the CP (36) and PPP (12) prevail over NTF (26 with object case, 3 object-less) as well. There are 2 exx for morphological accusative case: *niesiono*<NTF\_bring\_impf> *z Britaniew krolewnę*<ACC\_f\_a-decl>; *a sihu*<ACC\_a-decl> *ieho wsiu pobito*<NTF\_kill\_pf>. There are 3 exx of NTF with mask anim in the NP, cf. *tohdy ieho*<ACC\_m\_anim> *zawždy puszczano*<NTF\_let\_in\_impf>. There are 12 exx for NTF with mask inan/neuter noun NP, e.g. *abo pana sozženo*<NTF\_burn\_pf> *tilo*<ACC\_n>; *woysko*<ACC\_n> *ieho peredneie pobito*<NTF\_kill\_pf>. There are only 2 records for NTF with mask pl anim NP, cf. *A hde ich*<ACC\_pl\_anim> *postynano*<NTF\_kill\_pf>;

*aby ich*<ACC\_pl\_anim> *skarano*<NTF\_punish\_pf>. The numeral phrase (1) has also been attested in the NP, e.g. *a rukami poymano*<NTF\_catch\_pf> *kniazey sorok*<NUM>; and the quantifier (1) cf: *woyska ieho silno mnoho*<Q> *pobito*<NTF\_kill\_pf>. By-phrases are not attested with *-no*, *-to* forms in this chronicle. There are two records of NTF with neuter noun NPs that co-occur with past ru copula. Both records, however can also be personal sentences, cf. *Y bylo*<COP\_past\_ru> *tam wczyneno*<NTF\_organize\_pf> *welikoie weselie*<ACC/NOM\_n>; *kotoroie*<ACC/NOM\_n> *bylo*<COP\_past\_ru> *oprawleno*<NTF\_adjust\_pf> *u srebro* [stative passive]. The same goes for numeral-like nouns in the NP (2): *y pobito*<NTF\_lay\_down\_pf> *ich welikoie mnozestwo*<ACC/NOM\_n>; *y nemcow bezczyslennoie mnozestwo*<ACC/NOM\_n> *pobito*<NTF\_lay\_down\_pf>. Canonical passive occurs with present ru copula (9), e.g. *wsi sut*<COP\_pres\_ru> *pobity*<PPP\_kill\_pf> *ot bezboznoie Litwy*; past ru copula (16), e.g. *k[o]tory byl*<COP\_past\_ru> *poyman*<PPP\_catch\_pf> *ot nemcow*; and aorist copula (11), e.g. *wziat*<PPP\_sieze\_pf> *byst*<COP\_aorist> *Carhorod od turkow*. The external argument in canonical passive and participial passive is traditionally expressed in the form of *od/ot*-PP, e.g. *y Melnik od Batyia spustoszon*<NTF\_devastate\_pf> *y pokazeny*<NTF\_ravage\_pf>.

In mid-17<sup>th</sup> century *Barkulabivs'kyj litopys* the NTF (37 with and 5 without object case) prevails over CP (23) and PPP (3). There is one exx for morphological accusative, cf. *vzjato*<NTF\_take\_pf> *Stefana Baturu*<ACC\_f\_a-decl>. There are 13 instances of NTF with mask anim in the NP, e.g. *tam že ego*<ACC\_m\_anim> *četvertovano*<NTF\_quarter\_impf>; *Mytropolyta*<ACC\_m\_anim> *i vladykov prave khvaltom, slyše, prymušano*<NTF\_force\_pf> *do prysjahy*. Out of these 13 exx, 4 do not have an object NP, which, is, however, retrievable from the former clause or from the context, cf. *Stefan Batura, knjaža Semihrodskoe, perestavilsja, a* [implied *ego*<ACC\_m\_anim>] *pochovano*<NTF\_force\_pf> *u Krakove*. There is an old nominative-accusative form for pl animate nouns, cf. *vyslano*<NTF\_send\_pf> *napervej do Oršy eneraly*<ACC/NOM\_pl\_anim> [the new genitive-accusative form would be *eneralov*]. Neuter nouns/pronouns as well as mask inan nouns in the NP are all ambiguous between nominative and accusative (9), e.g. *Žyto*<ACC/NOM\_n> *kupovano*<NTF\_buy\_iter\_pf> *čvert' po grošej petnadcat'*; *Zamet*<ACC/NOM\_m\_inan> *zametano*<NTF\_put\_pf> *okolo cerkvi*. There are also quantifiers (2) and numeral phrases (2) in the NP, cf. *pobito*<NTF\_kill\_pf> *ot moskvy mnogo*<Q> *mnozestvo počtu*; *desjat'*<Num> *poslov meščan vypravleno*<NTF\_send\_pf>. There are 5 exx of NTF occurring with past ru copula, 4 of them might be instances of agreeing participles, since they have either a number, or a neuter/mask inan noun or pronoun in the NP. But there is one ex of mask pl anim in the NP, which might be an unambiguous instance of NTF used with past ru copula, cf. *a eho*<ACC\_m\_anim> *dynne bylo*<COP\_past\_ru> *schovano*<NTF\_hide\_pf> *i na Ukrainu Nizovskuju bylo*<COP\_past\_ru> *vyvezeno*<NTF\_take\_out\_pf>. The agent is expressed with *čerez*-PP (3): *pohrebeno*<NTF\_bury\_pf> *ego čerez pana Filona*;



*posvyjašče*<sub><NTF\_sanctify\_pf></sub> *chram Pokrov Svjatyja Bohorodicy čerez Fedora Filipoviča*. If the agent in NTF is a collective entity comprising a number of individuals, it is attested in the shape of ot-PP (2), e.g. *a toe imene bylo [...] nadano*<sub><NTF\_give\_pf></sub> *ot knjažat Bujnickich; pobito*<sub><NTF\_kill\_pf></sub> *ot moskvy mnoho množestvo počtu*. The canonical passive occurs with future ru copula (1), pres ru copula (4), aorist copula (3), past ru copula (15). There are 3 instances of čerez-PP in canonical and participial passive.

In early-16<sup>th</sup> century *Akademičnyj litopys* the CP (14) and PPP (1) records prevail over NTF (3). All 3 -no, -to forms occur with aorist copula and have a quantifier in the NP, cf. *inych knjazej poimano*<sub><NTF\_catch\_pf></sub> *byst'*<sub><COP\_aor></sub> *mnoho*<sub><Q></sub>. There are 14 records for canonical passive with aorist copula, 3 of them occur with ot-PP, cf. *i ubien'*<sub><PPP></sub> *byst'*<sub><COP\_aor></sub> *ot carja Navros'*. There is one instance of instrumental by-phrase on participial passive, i.e. *otpuščen' Tovlubii carem'*<sub><INST></sub> *rat'ju ko Smolen'sku*.

In late 17<sup>th</sup> c. *Jevrejinovs'kyj litopys* there are no records for morphologically unambiguous -no, -to forms with accusative. The distribution of passivoid phenomena is CP (10), PPP (5), NTF (18). There are 4 exx of NTF with a quantifier in the NP, e.g. *i pobito*<sub><NTF\_kill\_pf></sub> *ich mnoho*<sub><Q></sub>; 1 ex of NTF with a numeral-like noun in the NP, e.g. *pobito*<sub><NTF\_kill\_pf></sub> *množestvo*<sub><num-like></sub> *ljudei*. There are 8 exx for neuter noun/pronoun in the NP, cf. *A Novhorodskoe voevodstvo*<sub><ACC/NOM\_n></sub> *ot neho otnjato*<sub><NTF\_take\_away\_pf></sub>; *ili pana sožženo*<sub><NTF\_burn\_pf></sub> *tělo*<sub><ACC/NOM\_n></sub>; *a to*<sub><ACC/NOM\_pron></sub> *mi iz Neměc javleno*<sub><NTF\_reveal\_pf></sub>. There are 2 records of NTF with mask anim in the NP, cf. *po Velice dni carja*<sub><ACC\_m\_anim></sub> *zavolskoho pušče*<sub><NTF\_let\_go\_impf></sub> *iz Litvy*; and 2 with pl anim in the NP, cf. *i vsěch knjazei litovskich i slavných bojar*<sub><ACC\_pl\_anim></sub> *sožženo*<sub><NTF\_burn\_pf></sub>. The only case of NTF occurring with copula, and, additionally, with a complementizer *daby*, is the following: *daby na tom městě*<sub><ACC/NOM\_n></sub> *bylo*<sub><COP\_past\_ru></sub> *žylyšče učyneno*<sub><NTF\_make\_pf></sub>, *gdě by eho mertvaho sožhli*. As there is a neuter noun in the NP, there is no way to figure out whether this sentence is personal or impersonal. The canonical passive occurs with pres ru copula (2), past ru copula (6) and aorist copula (2). The agent in canonical and participial passives is expressed with ot-PP (5), e.g. *ubit*<sub><PPP\_kill></sub> *ot Hidimina*<sub><ot-PP></sub>.

A 16<sup>th</sup> c. *Litopys archeologičnoho tovarystva* has similar exx as the chronicle above. The passivoid phenomena is distributed as follows: CP (9), PPP (2), NTF (10). There are 4 exx with neuter noun in the NP, e.g. *albo pana sožžono*<sub><NTF\_burn\_pf></sub> *telo*<sub><ACC/NOM\_n></sub>; 3 exx with numeral phrase, e.g. *i pobito*<sub><NTF\_kill\_pf></sub> *ich mnoho*<sub><Q></sub>. There is one case of NTF occurring with copula, e.g. *aby na tom mescy bylo*<sub><COP\_past\_ru></sub> *žhlyščo*<sub><ACC/NOM\_n></sub> *učyneno*<sub><NTF\_make\_pf></sub>. There are 8 cases of canonical passive, 2 records of participial passive and one *zostać*-passive. The agent

in canonical and participial passive is expressed with ot-PP (4).

In the 17<sup>th</sup> c. *Litopys Krasyns'koho* the distribution is as follows: CP(4), PPP(2), NTF(7). There are 4 records of neuter nouns in the NP of NTF, that can be regular agreeing passives. There is 1 ex of pl anim noun in the NP and 1 numeral-like noun. In 3 clauses NTF occur with past ru copula, all 3 records however, can be agreeing passives, e.g. *i pobito*<NTF\_kill\_pf> *bylo*<COP\_past\_ru> *mnohoe mnozestvo*<ACC/NOM\_num-like\_noun> *ljudei, knjazei i bojar*. There is 1 record of NTF with pl anim in the NP, e.g. *vsich knjazei litovskich i znamenitych bojar*<ACC\_pl\_anim> *sožženo*<NTF\_kill\_pf>. The canonical passive occurs with pres ru (1), past ru (1) and aorist copula (1). There are also 2 records of participial passive, one of them occurs with ot-PP, e.g. *i Melnyk ot Batyja*<ot-PP> *spustošony*<PPP\_devastate> *i skaženy*<PPP\_ruin>.

In the 16<sup>th</sup> c. *Litopys Račyns'koho* the distribution is the following: CP(34), PPP(13), NTF(32). There are three records of unambiguously accusative case on NTF. In one of them, however, the argument is dropped, e.g. *holovu*<ACC\_a-decl> *eho čerez město Horodno na drevcu nesti kazal, potom* <ACC\_null> *u ozero v kolku miljach ukineno*<NTF\_throw\_pf>. Another one is used with the lexeme *nazvati*, i.e. *Korolju Žykhimontu urodilasja dočka s korolevoe Barbary v Poznan'ju, kotoruju*<ACC\_a-decl> *nazvano*<NTF\_name\_pf> *Edviha*. In the last one there is a conjunction between NTF and the direct object(s), i.e. *a nekotorych*<ACC\_pl\_anim> *šljachtu*<ACC\_a-decl> *i mučono*<NTF\_torture\_impf>. There are 7 records with pl anim in the NP, e.g. *a in"šych*<ACC\_pl\_anim> *po zamkoch u vezene rozoslano*<NTF\_send\_pf>. There are 12 records with neuter nouns, e.g. *voevod"stvo*<ACC/NOM\_n> *Trockoe vzjato*<NTF\_take\_pf>. There are 3 records of NTF with numeral phrases, 2 records with mask anim in the NP. NTF occurs with a copula once, i.e. *vsich knjazei litovskich i znamenitych bojar*<ACC\_pl\_anim> *sož"ženo*<NTF\_burn\_perf> *bylo*<COP\_past\_ru>. Two other instances of NTF with copula have a neuter noun in the NP, and thus can both be agreeing passives. There are 13 cases of PPP, e.g. *kostel zbudovan*<PPP\_build\_perf>. Canonical/participial passive is used with pres ru copula (9), past ru copula (9), *zostać*-passive (1) e.g. *i voisko*<ACC/NOM\_n\_sg> *ich vse pobito*<NTF\_kill\_pf> *na pljacju zostalo*<COP\_past\_pol>; as well as with ot-PP (10) and *čerez*-PP (1), i.e. *i korunovana*<PPP\_crown\_impf> [...] *čerez ar"cybiskupa hněznenskoho Jana z Laska*.

In *Nykyforivs'kyj litopys* the distribution is as follows: CP(43), PPP(7), NTF(2). In this late 15<sup>th</sup> c. heavily Church Slavonic text both *-no*, *-to* with direct object are syncretic between nominative and accusative: *A vse*<ACC/NOM\_pron> *iz"obnaženo*<NTF\_davastate\_pf> *i poruhano*<NTF\_pf> *horkoju smertiju nužnoju; i narečeno*<NTF\_give\_pf> *byst' imja*<ACC/NOM\_n\_inan> *emu Filipp*. Otherwise there are 7 records of PPP as aorist (narration mode), with both ot-PP (1) and inst agent (1), e.g. *Ubien*<PPP\_kill\_pf> *knjaz' Aleksandr pron'skyi ot svoeho brata*<ot-PP>; *otpuščen*<PPP\_let\_go\_pf>

*Tovljudii carem'*<INST> *rat'ju k Smolen'sku*. There are 42 records of canonical passive with aorist copula, co-occurring both with ot-PP (2) and inst agent (3), cf. *I posramlen*<PPP\_pf> *byst' car' ot neja*<ot-PP>; *I abie nemilostivymi plotojadci*<INST> *ubien*<PPP\_kill\_pf> *byst'*; *založena*<PPP\_ground\_pf> *byst'*<COP\_aor> *cerkvi na Moskvě svjataja Bohorodica s''bornaja avhusta 4 knjazem' Ivanom Danilovičem*<INST>. There is 1 record of canonical passive with pres ru copula, cf. *Pride emu věst'*, *Volodymer vzjat'*<PPP\_take\_pf> *est'*<COP\_pres\_ru>, *a cerkvy požženy*.

In the late 17<sup>th</sup> c. *Rum'ancevs'kyj litopys* the distribution of passivoid phenomena is as follows: CP(10), PPP(7), NTF(22). There are two records of NTF with accusative *a*-declension nouns, i.e. *Kondrata voevodu*<ACC\_a-decl> *zabito*<NTF\_kill\_pf>; *Moskvu*<ACC\_a-decl> *pobito*<NTF\_kill\_pf> *pod Oršeju*. There are 7 cases of pl anim in the NP, e.g. *a žolnerev*<ACC\_pl\_anim> *korolevych pobito*<NTF\_kill\_pf>. There are 3 cases of numeral phrase/numeral-like noun in the NP. There are 10 cases of neuter noun or pronoun in the NP, cf. *i voisko*<ACC/NOM\_n\_sg> *hospodarja ich pobito*<NTF\_kill\_pf>; *a to*<ACC/NOM\_p> *mně iz Nemec javleno*<NTF\_kill\_pf>. The copula on NTF is attested only once, in the environment ambiguous between accusative and nominative, and a complementizer *daby* in the structure, cf. *daby na tom městcy bylo*<COP\_past\_ru> *žehlyšče*<ACC/NOM\_n\_sg> *učyneno*<NTF\_make\_pf>. The canonical passive usually occurs with past ru copula (6), and ot-PP (2), e.g. *kotoryi byl*<COP\_past\_ru> *poiman*<PPP\_catch\_pf> *ot nemcov*<ot-PP>; present ru copula (4); aorist copula (1). Participial passives (7) occur with both ot-PP (2) and čerez-PP (1), i.e. *Věra zakonu rimskoho ustavlena*<PPP\_establish\_pf> *v Litvě čerez korolja polskoho*<čerez-PP> *i čerez velikoho knjazja litovskoho*<čerez-PP>.

In 16<sup>th</sup> c. *Sluc'kyj litopys* the passivoid phenomena is distributed as follows: CP (13), PPP (5), NTF (5). There is a neuter pronoun in the NP of NTF construction, i.e. *A vse izoblažno*<NTF\_devastate\_pf> *i poruhano*<NTF\_pf> *horkoju smertiju nužnoju*. There are 3 records of NTF with a quantifier in the NP with aorist copula, that however, can all be instances of canonical passive, i.e. *i pobito*<NTF\_kill\_pf> *ich' mnoho*<Q> *byst'*<COP\_aor>. One more NTF occurs with past ru copula and inst agent/inst of means, and has a neuter pronoun in the NP, cf. *A to bylo*<COP\_past\_ru> *dobyto*<NTF> *litov'skimi silami*<INST>. There are 5 passive participles used as aorist, 1 of them with ot-PP, i.e. *Tohdy ot Vitovta*<ot-PP> *ubit*<PPP\_kill\_pf> *nužnoju smertiju*. There are 12 records for canonical passive with aorist copula and 1 inst by-phrase, e.g. *Osnovana*<PPP\_ground\_pf> *byst'*<COP\_aor> *cerkvi svjataja Bohorodica Pečer'skaja ihumenom' Feodosiem*<INST>.

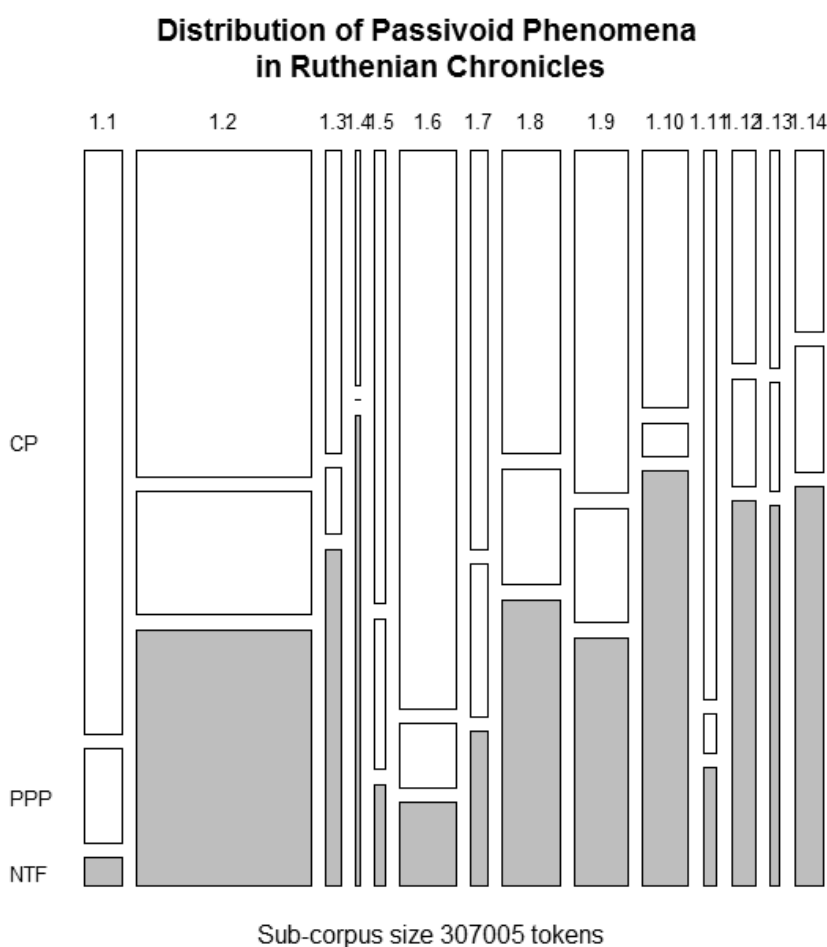
In early 16<sup>th</sup> century *Suprasl'kyj litopys* the passivoid phenomena is distributed as the follows: CP (61), PPP(7), NTF (9). There are 2 NTF with neuter nouns in the NP, i.e. *vo svee imja vetšano*<NTF\_build\_impf> *horod*<ACC/NOM\_m\_inan>, *Izbranie*<ACC/NOM\_n\_sg> *lětopisanija izloženo*<NTF\_outline\_pf> *v''kratce*. Other 5 records of NTF occur with aorist copula and neuter

noun or quantifier in the NP, cf. *inych knjazej izymano*<NTF\_win\_pf> *byst'*<COP\_aor> *mnoho*<Q>. There are 7 records of passive past participles, 1 of them is used with ot-PP, another with inst of agent. The canonical passive is used exclusively with aorist copula (59), and occurs both with ot-PP (5) and inst agent (4), e.g. *i narečen*<PPP\_call\_pf> *byst'*<COP\_aor> *ot mitropolita*<ot-PP> *Semion*; *i privedeni*<PPP\_bring\_pf> *byša*<COP\_aor> *na Moskvu poslom' carevym Tatuem'*<INST>.

In the 16<sup>th</sup> c. *Vilens'kyj litopys* the distribution goes: CP (2), NTF (4). There are 2 NTF with a quantifier and a numeral-like noun in the NP, i.e. *i pobito*<NTF\_kill\_pf> *ich mnoho*<Q>; *i pobito*<NTF\_kill\_pf> *ich množestvo*<num-like>. The NTF occurs with aorist copula (1) and a quantifier in the NP, i.e. *Božuju siluju tuto nemalo*<Q> *izbito*<NTF\_kill\_pf> *byst'*<COP\_aor> *rati*; and with past ru copula (1) and a quantifier in the NP, i.e. *i inych knjazei poimano*<NTF\_catch\_pf> *bylo*<COP\_past\_ru> *mnoho*<Q>. There are 2 canonical passive constructions with aorist copula.

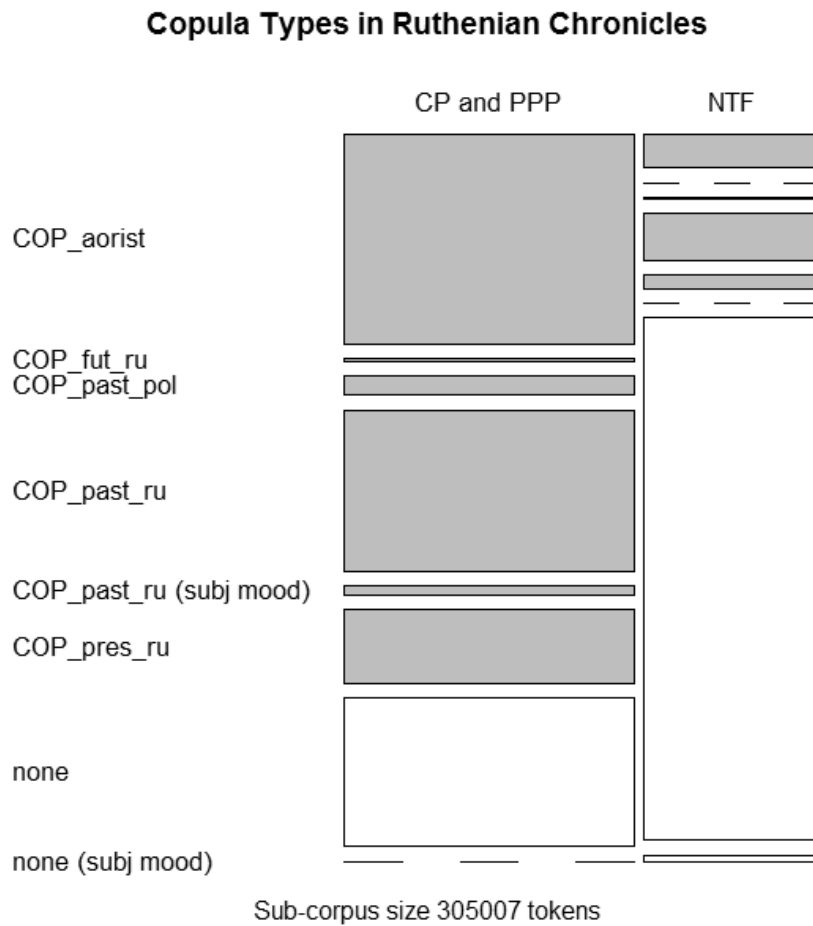
In early 16<sup>th</sup> c. *Volyns'kyj korotkyj litopys* the distribution goes: CP (9), PPP (3), NTF (2). There are 2 NTF records with a quantifier and a number in the NP, cf. *malo*<Q> *nešto našych ubito*<NTF\_kill\_pf>; *a vsich ich ubito*<NTF\_kill\_pf> *trista i sorok*<num>. There are 3 passive past participles used as aorist. The 9 instances of canonical passive occur with aorist copula, inst by-phrase (4) and ot-PP (1), cf. *vzjat'*<PPP\_take\_pf> *byst'*<COP\_aor> *Car'hrad carem tur'skym*<INST>; *vzjat'*<PPP\_take\_pf> *byst'*<COP\_aor> *Kiev' ot bezbožnych tatar*<ot-PP>.

# Chart 6.1.1.a



- 1.1 *Nykyforivs'kyj litopys* [Nykyfor Chr.] (1470-1499), 15,050 tokens
- 1.2 *Chronika Lytavs'ka j Žmojts'ka* [Lith. and Samog. Chr.] (1480-1520), 93,073 tokens
- 1.3 *Litopys Archeolohičnoho tovarystva* [Archeol. Society Chr.] (1500-1699), 9,255 tokens
- 1.4 *Vilens'kyj litopys* [Vilna Chr.] (1500-1599), 4,655 tokens
- 1.5 *Volyns'kyj korotkyj litopys* [Volyn' Short Chr.] (1500-1530), 7,539 tokens
- 1.6 *Suprasl'kyj litopys* [Suprasl' Chr.] (1500-1530), 26,643 tokens
- 1.7 *Sluc'kyj litopys* [Sluc'k Chr.] (1500-1599), 13,882 tokens
- 1.8 *Litopys Račyns'koho* [Račyns'kyj Chr.] (1500-1599), 22,042 tokens
- 1.9 *Chronika Bychovcja* [Bychovec' Chr.] (1600-1699), 37,665 tokens
- 1.10 *Barkulabivs'kyj litopys* [The Chr. of Barkolabovo] (1640-1660), 16,574 tokens
- 1.11 *Akademičnyj litopys* [Academic Chr.] (1640-1660), 9,769 tokens
- 1.12 *Jevrejinovs'kyj litopys* [Jevrejinovs'kyj Chr.] (1670-1699), 19,880 tokens
- 1.13 *Litopys Krasyns'koho* [Krasyns'kyj Chr.] (1600-1699), 13,819 tokens
- 1.14 *Rum'ancevs'kyj litopys* [Rum'ancev Chr.] (1670-1699), 17,159 tok

# Chart 6.1.1.b



This data frame contains 776 observations of 2 variables. The independent factor “copula” has 8 levels, cf. the table below:

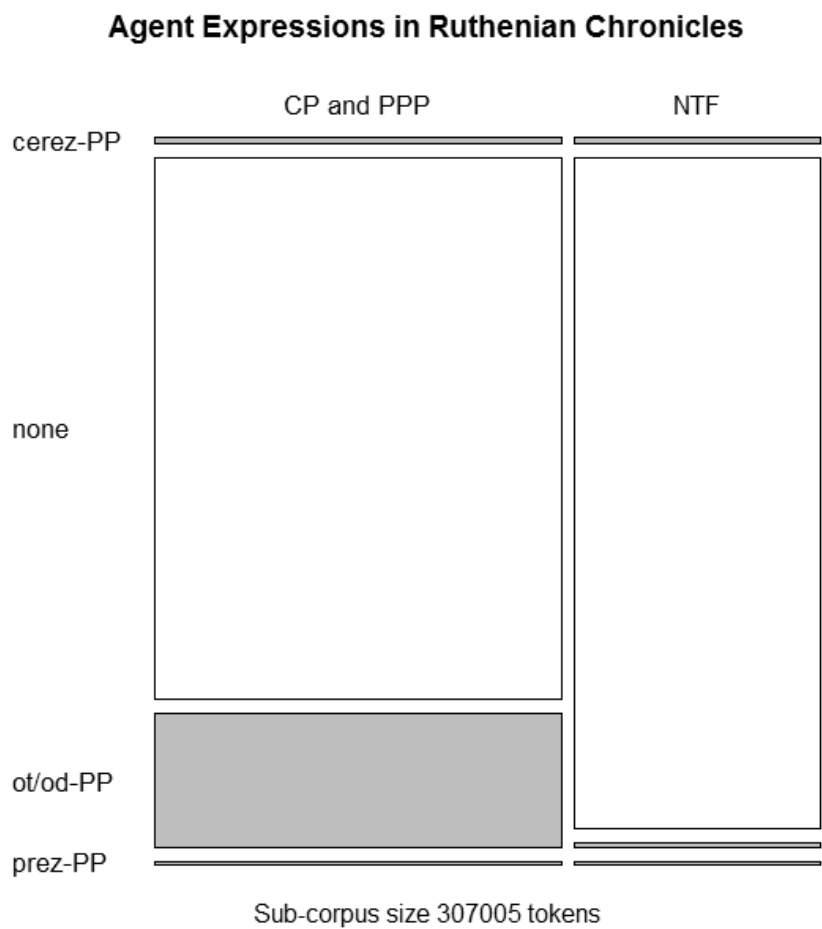
	COP_aorist	COP_fut_ru	COP_past_pol	COP_past_ru
CP and PPP	163	2	15	125
NTF	16	0	1	22

	COP_past_ru (subj mood)	COP_pres_ru	none	none (subj mood)
CP and PPP	7	57	115	0
NTF	6	0	244	3

X-squared = 283.4165, df = 7,  $p$ -value < 2.2e-16.

Chart 6.1.1.c

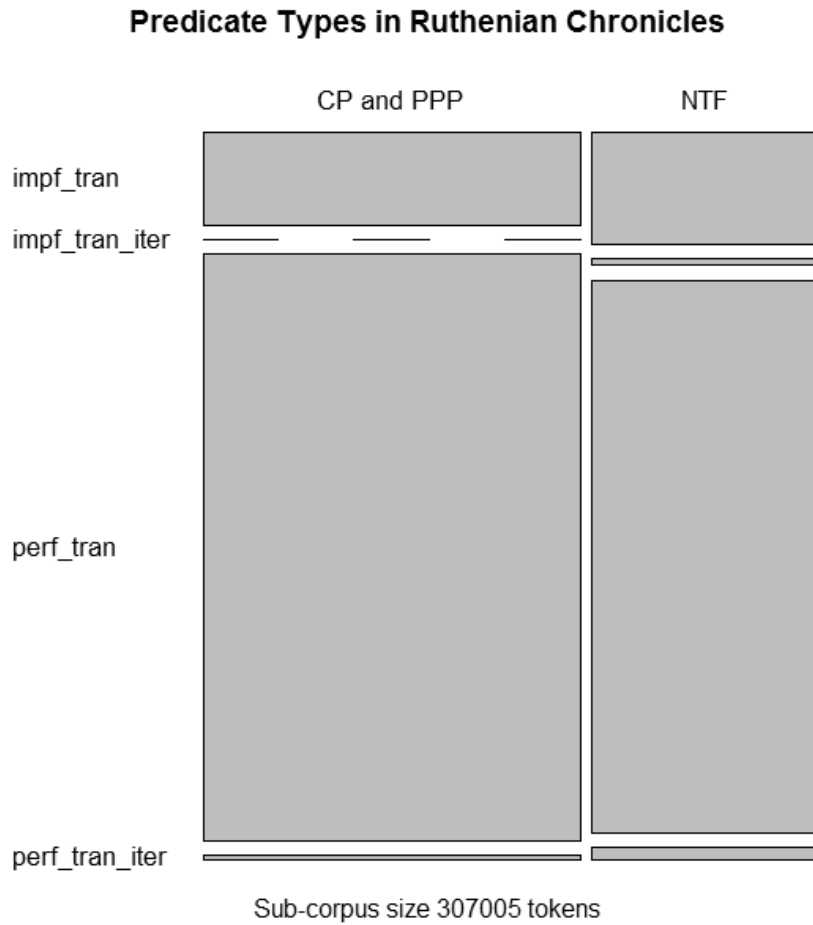


This data frame contains 776 observations of 2 variables. The factor “agent” has 4 levels. The table with numbers is below:

	cerez-PP	none	ot/od-PP	prez-PP
CP and PPP	5	383	94	2
NTF	3	286	2	1

X-squared = 59.1821, df = 3, *p*-value = 8.789e-13; Fisher's *p*-value < 2.2e-16.

## Chart 6.1.1.d



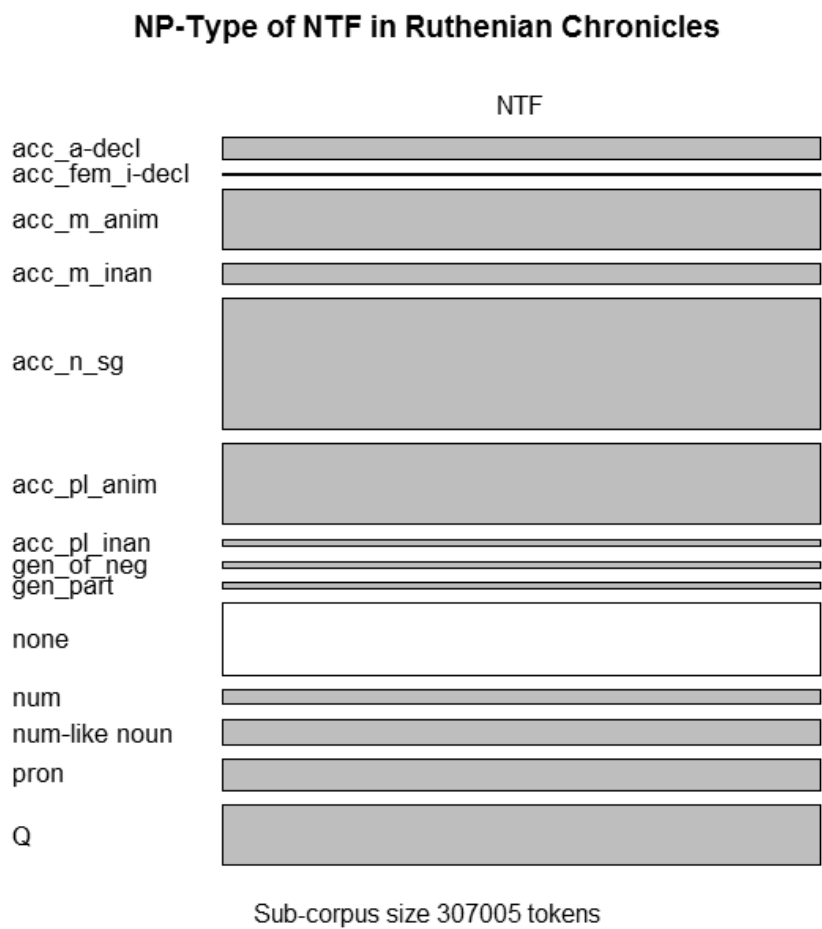
This data frame contains 776 observations of 2 variables. The independent variable “predicate” has 4 values. The table with numbers is below:

	impf_tran	imperf_tran_iter	perf_tran	perf_tran_iter
CP and PPP	66	0	415	3
NTF	48	3	236	5

X-squared = 8.5803, df = 3,  $p$ -value = 0.03542; Fisher's  $p$ -value = 0.03054.



Chart 6.1.1.e



This data frame consists of 292 observations of 2 variables. The independent variable “NP” has 14 levels. The table with numbers is below:

	acc_a-decl	acc_fem_i-decl	acc_m_anim	acc_m_inan	acc_n_sg
NTF	12	1	32	11	71

	acc_pl_anim	acc_pl_inan	gen_of_neg	gen_part	none
NTF	44	4	4	3	39

	num	num-like noun	pron	Q
NTF	8	14	17	32

X-squared = 254.67, df = 13, *p*-value < 2.2e-16.

### Regression Analysis 5.3.1.f Belarussian-Lithuanian (Ruthenian) Chronicles Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Subjunctive\_mood + Copula:Agent + Copula:Predicate\_type +  
Subjunctive\_mood:Agent + Subjunctive\_mood:Predicate\_type + Agent:Predicate\_type).

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood Ratio Test		Discrimination Indexes		Rank Discrim. Indexes	
Obs	776	LR chi2	366.76	R2	0,51	C	0,86
CP and PPP	484	d.f.	10	g	0,3	Dxy	0,73
NTF	292	Pr(> chi2)	<0.0001	gr	0,19	gamma	0,84
max  deriv	0.002			gp	0,34	tau-a	0,34
				Brier	0,14		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	0.6567	0.1223	5.37	<0.0001
Copula	-1.4671	0.1414	-10.38	<0.0001
Subjunctive_mood	7.7727	57.6912	0.13	0.8928
Agent	-1.0479	0.3528	-2.97	0.0030
Predicate_type	1.3738	0.4302	3.19	0.0014
Copula * Subjunctive_mood	-6.9623	57.6932	-0.12	0.9039
Copula * Agent	-0.5897	0.6388	-0.92	0.3559
Copula * Predicate_type	-2.7685	0.7319	-3.78	0.0002
Subjunctive_mood * Agent	10.9651	106.0495	0.10	0.9176
Subjunctive_mood * Predicate_type	0.2961	1.4841	0.20	0.8419
Agent * Predicate_type	-7.4763	25.1533	-0.30	0.7663

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 277.17, df = 5,  $p$ -value < 2.2e-16

Agent: X-squared = 59.182, df = 3,  $p$ -value = 8.789e-13; Fisher's  $p$ -value < 2.2e-16

Predicate\_Type: X-squared = 8.5803, df = 3,  $p$ -value = 0.03542; Fisher's  $p$ -value = 0.03054

Subjunctive\_mood: X-squared = 1.6715, df = 1,  $p$ -value = 0.1961; Fisher's  $p$ -value = 0.1269

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test in the first column of the first table indicate that the logistic regression model fits the data well. The values of the coefficients C and Dxy indicate a good predictability of the dependent variable "NTF\_or\_PPP" from the independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood" and an acceptable fitting ability of the model. The last column of the second table contains the  $p$ -values for all the Factors and their interactions. The  $p$ -values of the Factors "Copula", "Agent" and "Predicate\_type" are small enough to reject the null hypothesis, which means that these Factors render a significant contribution, while the  $p$ -value of the Factor "Subjunctive\_mood" in this model is too high to reject the null hypothesis. The interaction between Factor "Copula" and Factor "Predicate\_type" is significant, since the  $p$ -value is very small. The  $p$ -values of the four Factors in the independence tests tend to be smaller than their cognate values within the model, with the exception of the Factor "Predicate\_type". Besides, both tests render similar results for each Factor.

### 6.1.2. Cossack writings approx. 1600s–1700s [8 texts; 190,140 tokens]<sup>109</sup>

The next group of texts deals with writings by and about the Cossacks<sup>110</sup>. The East Slavonic Cossack movement originate in the 15<sup>th</sup> c. in the steppe borderland known as the Wild field. This buffer territory between the Polish-Lithuanian Commonwealth and the Crimean Tatars is today's Central and South-Eastern Ukraine. The authors of these writings are predominantly Cossack leaders, who pay special attention to the history of Cossacks and events in the Cossack state Hetmanate (1649-1764), or the events shortly before and afterward. The authors use a wide range of sources, like Polish chronicles, diaries of eye witnesses, writings of Western European scholars, legal documents.

The narration mode of late 18<sup>th</sup> c. *Kratkoe istoriceskoe opisanie o Maloj Rossii* is predominantly PPP (78) together with CP (59); NTF (23 with object case and 11 without objectcase). The PPP occurs with inst agent (1), but predominantly with ot-PP (9), e.g. *čto ot' Poljakov' <ot-PP> mir' narušen' <PPP\_disturb\_pf>*. The canonical passive is attested predominantly with past ru copula (50); it is attested with inst agent (2), e.g. *a nasil'no uderžany byli <COP\_past\_ru> im' <INST>*; *Hetman' Chmel'nyckij prišel v' Kiev', byl' <COP\_past\_ru> vstrěčen' Mitropolitom' Sil'vestrom' <INST>*; with ot-PP (4), e.g. *čtob' žyzni ne byl' ot' nich' <ot-PP> lišen' <PPP\_impf>*; *črez'-PP* (1), i.e. *Vyhovskij byl', črez' prislannaho ot' Hosudarja s' hramotoju Bojarina <črez'-PP> [...] utveržden' <PPP\_pf> v' sem' dostoinstvě*. The canonical passive also occurs with a future copula (6). There are 14 records of NTF with a neuter noun/pronoun in the NP, 1 of them occurs with inst agent, i.e. *i sie uže ot' Polubotka predloženie <ACC/NOM\_n\_sg> vsěmi <INST> prinjato <NTF\_pf>*; 2 more occur with ot'-PP, i.e. *kotoroe městečko <ACC/NOM\_n\_sg> dano <NTF\_give\_pf> vo vladěnie ot' voevody <ot-PP>*, *Sie vremja <ACC/NOM\_n\_sg> opreděleno <NTF\_pf> nam' ot' Vsemoguščaho Boga <ot-PP>*. NTF with past ru copula (5) has a neuter noun/pronoun in the NP, and thus is ambiguous between personal and impersonal sentence, i.e. *učineno <NTF\_pf> bylo <COP\_past\_ru> soobščenie <ACC/NOM\_n\_sg>*. The absence of genitive of negation in negated clauses speak for the personal status of such -no, -to, cf. *Eželi by ne sokryto <NTF\_pf> ot' nas' bylo <COP\_past\_ru> sie Korolevskoe pis'mo <ACC/NOM\_n\_sg>*. There are 2 records with a quantifier in the NP, i.e. *Sěč'*

109Below are the writings incorporated into the corpus: *Dobromysl's'kyj litopys* [Dobromysl Chronicle], 0,557 tokens; *Kratkoe istoriceskoe opisanie o Maloj Rossii* [A Brief Historical Description of Little Russia], 44,342 tokens; *Kratkoe opisanie Malorosii* [A Brief Description of Little Russia], 29,939 tokens; *Litopys Hryhorija Hrabjanky* [Hrabjanka chronicle], 14,031 tokens; *Litopys Samijla Velyčka* [Samijlo Velyčko chronicle], 20,359 tokens; *Litopys Samovydcja* [Eye Witness chronicle], 53,779 tokens; *Lyzohubivs'kyj litopys* [Lyzohub chronicle], 20,417 tokens; *Synopsis* [Sinopsis], 6,716 tokens.

110Below is Shevelov's (1979) description of the Cossack origins: „The semi-military, semi-large-scale-robber organization of the Crimeans found imitators among the Ukrainians. Bands of men set out for the steppes and, half-nomadic in their new way of life, combined economic exploration of the fertile man-made desert with assaulting and robbing of the Tatars. This was the beginning of the Cossacks, a movement documented under this name since 1492“ (387).

*razorena i mnoho<Q> Zaporožcov" pobito<NTF\_pf>; na ktorej stepi rozmnoženo<NTF\_pf> dovol'no<Q> selenij.* There is also a record with genitive of negation (1) in the NP, i.e. *Měsjaca<GEN> i čisla<GEN> ne označeno<NTF\_pf>.*

The prevailing narration mode in early or middle 18<sup>th</sup> c. *Kratkoe opisanie Malorosii* is again PPP (112), followed by NTF (83 with object case, 3 without a head noun) and CP (33). PPP occurs with long form participles in -y, and with hum ot-PP (16), i.e. *no ot serdjukov" hetmanskich"<ot-PP> tot" chas" prohnany<PPP\_long>;* as well as with črezъ-PP (2), i.e. *do kiev'skich" knich" vpisan" marta 8 dnja črezъ Nečaja.* The CP (33) is used with present ru copula (2), future ru copula (4), past ru copula (23), poln past *zostać*-copula (4). The canonical passive occurs with ot(ъ)-PP (8), cf. *posilan" byl"<COP\_past\_ru> tuda ot Mazepy<ot-PP> Radič" s" vojskom"; ot" kozakov"<ot-PP> [...] očen' poraženy i poměšany vsi zostali<COP\_past\_pol>.* In contrast to in form and content similar late 18<sup>th</sup> c. textbook-like work *Kratkoe istoriceskoe opisanie o Maloj Rossii* (that does not have any NTF with an *a*-declension noun in the NP), this early or mid-18<sup>th</sup> c. work still manifests several *a*-declension nouns in the NP of NTF (12), cf. *i Poltavu<ACC\_a-decl> spaleno<NTF\_burn\_pf>; i ženu<ACC\_a-decl> emu dano<NTF\_give\_impf>; i holovu<ACC\_a-decl> do Chemlickoho na kop'i prineseno<NTF\_bring\_pf>; i odeždu<ACC\_a-decl> ot onich" pootbirano<NTF\_take\_away\_pf>; za služby ich" dano volnosti i priverneno<NTF\_obtain\_pf> zemlju<ACC\_a-decl>.* Then the NTF construction also occurs with a non-*a*-stem in the NP (1); with pl inan in the NP (8), i.e. *da i taljary<ACC/NOM\_pl\_inan> bytie davano<NTF\_give\_iter>;* with pl anim noun in the NP (13), i.e. *i ostalnych" utěkačov"<ACC\_pl\_anim> honeno<NTF\_pursue\_impf> i vezdě bito<NTF\_slaughter\_impf>;* with mask anim in the NP (21), e.g. *kohda suženo<NTF\_judge\_impf> Lopuchina<ACC\_sg\_anim>;* with mask sg inan in the NP (1), i.e. *Smolensk"<ACC/NOM\_sg\_inan> vzjato<NTF\_take\_pf>;* with a neuter noun/pronoun in the NP (16), e.g. *dvorjanstvo<ACC/NOM\_n\_sg> davano<NTF\_give\_iter>;* with a numeral phrase in the NP (4), e.g. *dano<NTF\_give\_impf> trista<ACC/NOM\_num> dvorov".* NTF occurs with past ru copula (3), 1 of these records is syncretic between accusative and nominative, i.e. *kotoraho tělo<ACC/NOM\_n\_sg> provaženo<NTF\_escort\_pf> bylo<COP\_past\_ru> do Soročinec';* the other 2 are more explicit, cf. *a samych" ich"<ACC\_pl\_anim> v" turmach" zaključeno<NTF\_enclose\_pf> bylo<COP\_past\_ru>; kotoraho<ACC/GEN\_m\_anim> s" Andreem" Horlenkom" [...] vzjato<NTF\_take\_pf> bylo<COP\_past\_ru>.*

The author of the 18<sup>th</sup> c. *Litopys Hryhorija Hrabjanky* prefers personal active sentences over impersonal ones for narration. The distribution of the passivoid phenomena in this text is as below: CP(9), PPP(8), NTF(11 with object case, 3 without any head noun). The canonical passive (9) occurs with imperf copula (1), e.g. *a jehda čteni bjachu<COP\_impf> punkta pred černju;* with aorist copula (2), i.e. *Tamo ubijen bist'<COP\_aor> Škurat;* with past mod ua copula (4) and ot-PP (1), i.e. *Kosyns'kyj [...] ot ljachov<ot-PP> poražen buv<COP\_past\_mod\_ua>;* with

present ru copula (1) and future ru copula (1). The PPP construction (8) occurs with ot-PP (3), e.g. *tamo ot značnijšych ljachov<ot-PP> ubijen<PPP\_kill\_pf> Volovyč*. NTF occurs with a neuter noun/pronoun in the NP (8), 3 of these occur with aorist copula *bi*, cf. *postavleno<NTF\_locate\_pf> bi<COP\_aor> vojs'ko zaporoz'koje naperedi*. The use of *bi* instead of *byst* might be due to a confusion in the use of the 2<sup>nd</sup> and 3<sup>rd</sup> person sg of aorist generally attested in the Middle period. NTF also occurs with pl anim in the NP (2), e.g. *Jich<ACC\_pl\_anim> že tamо pryjmovano<NTF\_iter>*; and with a numeral-like noun (1).

The passivoid phenomena in early 18<sup>th</sup> c. *Litopys Samijla Velyčka* is distributed as follows: CP (40), followed by PPP (26) and NTF (21 with a head noun, 11 without a head noun). PPP (26) occurs with ot-PP (7), e.g. *ot Vyhovs'koho<ot-PP> skorumpovanyj<PPP\_corrupt\_pf>*. The canonical passive (40) occurs with aorist copula (1), e.g. *iž cale svitlost' dnevnaja mrakom noščnym byst'<COP\_aor> zakryta*; imperf copula (2), e.g. *i zvizdy na nebesi vydiny bjachu<COP\_impf>*; past pol copula (11), e.g. *ot nikkojeho druha svoeho zostal<COP\_past\_pol> peresterežen*; present/future pol copula (1), i.e. *chto izbran zostanet<COP\_future\_pol> het'manom*; future ru copula (1), i.e. *že on het'manom postavljen ne budet<COP\_fut\_ru>*; present ru copula (3), e.g. *iž ostavljeni oni sut'<COP\_pres\_ru> pry nem*; past mod ua copula (22), e.g. *hdy voprošen був<COP\_past\_mod\_ua> takovym slovom*. Pol copula occurs with ot-PP (5), e.g. *iž udarovan zostal ot neho<ot-PP> pancyrom čerkes'kym*. Ua copula occurs with ot-PP (3), e.g. *vdjačne був ot samoho hana<ot-PP>*, [...], *pryvitan i pozdoroven*; and with črez-PP (2), e.g. *črez posla jich Jaskol's'koho<črez-PP> buly nakupleni*. There is an *a*-stem noun (1) in the NP of NTF, e.g. *Jakuju poholosku<ACC\_a-decl> v Siči meždu vojs'kom puščano*. There is also a rare case of *a*-stem noun in the genitive (1) in the NP, cf. *vojs'ko jedno pošlo v cerkov na službu božiju, ktoroji<GEN\_a-decl> tohda, vlasne, zadzvoneno<NTF>*. There is 8 cases of a neuter noun/pronoun in the NP, e.g. *toje ž haslo<ACC/NOM\_n\_sg> včyneno<NTF>*; *leč toje<ACC/NOM\_pron> vzjato<NTF> na dal'soe rozsmotrenije*. Besides, in NP of NTF there is a numeral phrase (4), e.g. *prydano<NTF> k nym pichoty nimec'koj dvi<ACC/NOM\_num> tysjači*; mask anim noun (3), e.g. *a Krečovs'koho<ACC\_mask\_sg> otmineno<NTF>*; pl anim noun (3), e.g. *rannych<ACC\_pl\_anim> zas' žeby hojeno<NTF> i z pyl'nostju dosmotryvano<NTF>*; *tych vsich<ACC\_pl\_anim> aby za storožu brano<NTF>*; *no i vsich nimcov<ACC\_pl\_anim> vykoloto<NTF> i nurtam dniprovyom otdano<NTF>*. NTF occurs with past ru copula (1), co-occurring with a complementizer *žeby* in the structure, e.g. *a rjadovoje vse tovarystvo [...] žeby bulo<COP\_past\_mod\_ua> zamkneno<NTF>*, *storožuju kripko opatreno<NTF> i jakmoha kormleno<NTF>*, *a holodom ne moreno<NTF>*. Since however, there is a neuter noun in the NP, this record might be an instance of agreeing passive. NTF occurs with črez-PP (2), cf. *pojmano<NTF> na šljachu sičovom črez tatar<črez-PP> čolovika pod desjatok podzornych; pravo*

*kozac'koje [...] črez poljakov<črez-PP> premineno<NTF>.* NTF also occurs with ot-PP (1), cf. *i Čyhyryns'kyj povit Konec'ol's'komu [...] ot korolja<ot-PP> nadano<NTF>.*

In 17<sup>th</sup> c. *Litopys Samovydcja* NTF (241 with a head noun; 4 with a retrievable null argument; 10 without a head noun) records considerably outnumber PPP (23) and CP (19). PPP as aorist (23) occurs with ot-PP (3), e.g. *Chan zas' ot turčyna<ot-PP> poslan<PPP\_send\_pf> na oboronu Čyhyryna.* CP (19) is attested with past ru copula (15), e.g. *kotoraja byla<COP\_past\_ru> pribudovana u olatri;* with past pol copula (3), e.g. *I za toe skarany zostaly<COP\_past\_pol>;* and with past semi-polish copula (1), i.e. *ale za pomoščiju božieju i tie rozbyty staly<COP\_past\_semi-ua>.* Past ru copula occurs with ot-PP (6), e.g. *pryslannij byl<COP\_past\_ru> ot eho carskoho veličestva<ot-PP> djak Bačmakov.* There are 25 records for NTF with an *a*-declension noun in the NP, cf. *i odežu<ACC\_a-decl> moskovskuju otmineno<NTF\_abolish\_pf>; carycu<ACC\_a-decl> i patryjarchu<ACC\_a-decl> povolano<NTF\_oust\_pf>; žonu<ACC\_a-decl> emu dano<NTF\_give\_impf> rodu značoho; po zamkach šljachtu<ACC\_a-decl> dostavano<NTF\_reach\_pf\_iter>.* There are 2 records for NTF with a non-*a*-declension feminine noun. Besides NTF occurs with mask anim in the NP (57), e.g. *hde onoho<ACC/GEN\_m\_anim> šanovano<NTF\_treat\_impf>, udarovano<NTF\_endow\_pf> i druhoho dnja otpuščeno<NTF\_release\_pf> do vojska; bo onoho<ACC/GEN\_m\_anim> otrujeno<NTF\_poison\_pf> i tam pomerl; a na eho misce obrano<NTF\_select\_pf> Varlama Jasynskoho;* with pl anim in the NP (55), cf. *dobre onych<ACC/GEN\_pl\_anim> hnano<NTF\_persecute\_impf>; v kolodjaz' vsich<ACC/GEN\_pl\_anim> vkydano<NTF\_throw\_pf>; kotorych<ACC/GEN\_pl\_anim> napotom imano<NTF\_catch\_impf>, višano<NTF\_hang\_impf>, stynano<NTF\_kill\_pf> i mordovano<NTF\_beat up\_impf>, jako zločyncov;* with pl inan in the NP (23), e.g. *hde sudna morskije hotovano<NTF\_prepare\_impf>; a obrazy božie, [...], po ulicach moščeno<NTF\_pave\_impf>;* with numeral phrase/quantifier in the NP (17), e.g. *že onomu tam nemalo<Q> ukazano<NTF\_indicate\_pf> maetnostej; i inich nemalo<Q> kazneno<NTF\_execute\_impf>.* NTF frequently co-occurs with a neuter noun/pronoun in the NP (41), e.g. *a toe<ACC/NOM\_n\_sg> robleno<NTF\_make\_impf> koštom carskim; jak tilo<ACC/NOM\_n\_sg> poprovaženo<NTF\_escort\_pf> do Nižyna.* NTF also co-occurs with ot-PP (4), cf. *use toe zneseno<NTF\_ruin\_pf> ot korolja polskoho<ot-PP>; kotorym platu i sukna ot korolja<ot-PP> davano<NTF\_give\_impf\_iter>; i ot eho carskoho veličestva<ot-PP> prisylano<NTF\_send\_pf> kozakam žalovanja kopijky zolotye; ktoroho pytano<NTF\_ask\_impf> ot konsystoriji archyepiskopskoj<ot-PP>;* as well as with inst agent (1), cf. *prokljatie čytano<NTF\_read\_impf> pastyrskoe pry službi božoj i svičky hašeno<NTF\_blow out\_impf> na proklatie Šuboju<INST>, svjaščennykom černihovskym;* with prez-PP in a clause without any head noun, cf. *pytano<NTF\_ask\_impf> po kylka krot prez asaulov vojska<prez\_PP>.* NTF is attested with past ru copula (9) partially co-occurring with the modal particle *žeby*. The overwhelming majority of such records (7) have an NP ambiguous between nominative and accusative, cf. *žeby toe<ACC/NOM\_pron> na potreby vojskovie oberneno bylo<COP\_past\_ru>; A*

*vojisko*<ACC/NOM\_n\_sg> *kozackoe, kotoroe poslano*<NTF> *bylo*<COP\_past\_ru> *z sestrencem hetmanskim, [...], na tot čas ne pospišylo; A maetnosti*<ACC/NOM\_pl\_inan> *jich usich troch [...]* *perepysano*<NTF> *bylo*<COP\_past\_ru> *do skarbu carskoho; ščo*<ACC/NOM\_pron> *tam poslano*<NTF> *bylo*<COP\_past\_ru>. In the remaining two there is a genitive-accusative pl inan in the NP, cf. *Toho ž roku bylo*<COP\_past\_ru> *dostatkov*<ACC\_pl\_inan> *Pečerskoho monastyra pryprovaženo*<NTF> *do Staroduba*; and there is a bare NTF without a head noun, cf. *I ma osaženo*<NTF> *korolja*<ACC\_mask\_anim> *eho milost', i bez malo do toho ne prišlo by, že i uzjato*<NTF> *by bylo*<COP\_past\_ru> [the NP is however retrievable from the previous clause]. The NTF construction undergoes the genitive of negation (8), e.g. *ale onoho*<GEN\_m\_anim> *v Polšču ne dopuščeno*<NTF\_permit\_pf>; *žeby ne otdano*<NTF\_return\_pf> *Ukrajiny*<GEN\_a\_decl> *korolevi*.

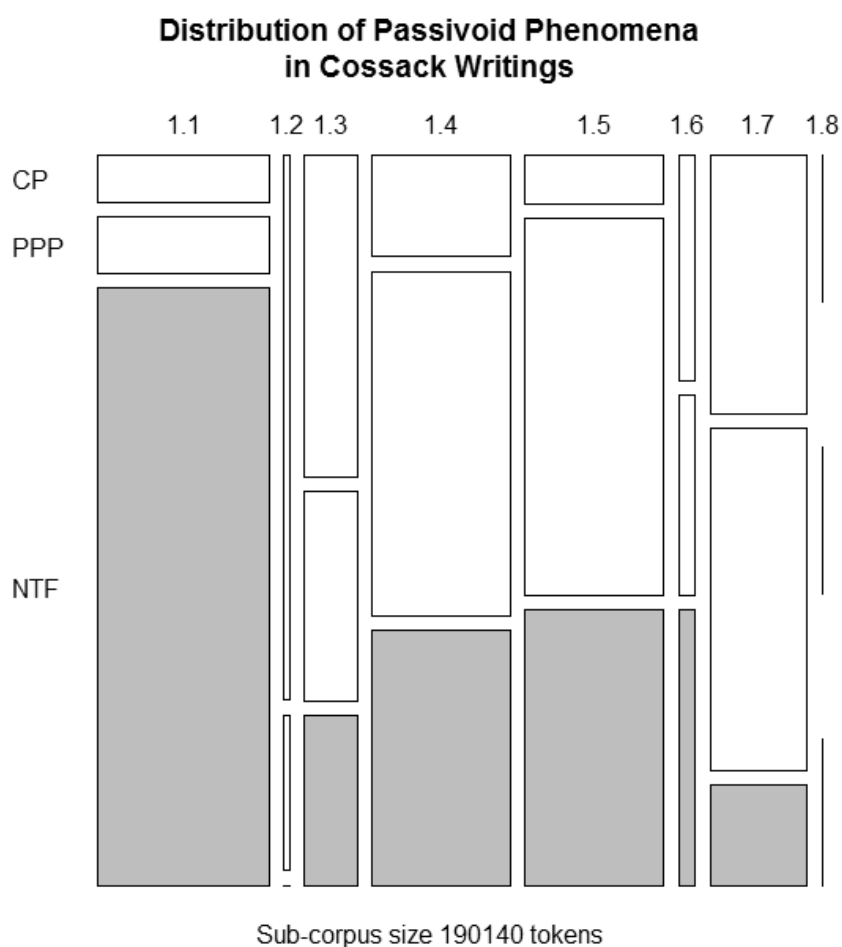
The distribution of the passivoid phenomenon in *Lyzohubivs'kyj litopys* compiled in 1742 is as below: PPP (123), CP (16) and NTF (90 with object case; 3 with a null argument retrievable from the context; 7 without a head noun). PPP (123) is attested with the inst agent (2), e.g. *umer" i pohreben" v" Astrachani episkopom" Lěnickim*"<INST>; with *črez"-PP* (5), e.g. *i požitki ich opisany*<PPP> *na Hosudarja črez" brihadira Rumjanceva*<črez"-PP>; *V" sich" hodach" črez" Mjaskovskoho i Kiselja*<črez"-PP> *učinena*<PPP> *kozakam" hranica*; as well as with *ot-PP* (14), e.g. *razbityj*<PPP> *ot" turok"*<ot-PP>; *ot" ljachov"*<ot-PP> *vzjat"*<PPP>; *ot" Samojloviča*<ot-PP> *z" vojskami pod" Směluju poslanyj*<PPP>. There are 13 records of unambiguous NTF plus accusative construction, cf. *kozakam" vsjakuju svobodu*<ACC\_a\_decl> *otnjato*<NTF>; *a ženu hetmanskuju*<ACC\_a\_decl> *uboho velmy otoslano*<NTF> *do Sedneva na meškanja; kohda brošeno*<NTF> *sil'nuju v" Očakov" bombu*<ACC\_a\_decl>. NTF occurs with NPs ambiguous between nominative and accusative, like neuter noun/pronoun (18) e.g. *kozakam' hetmanstvo*<ACC/NOM\_n> *pryverneno*<NTF>; *no predměste*<ACC/NOM\_n> *vse spustošeno*<NTF>; *i dano*<NTF> *im" žalovanie*<ACC/NOM\_n>; numeral phrase/quantifier (11), e.g. *Tohdaž švedov"*, [...], *mnoho*<ACC/NOM\_num> *pobito*<NTF> *i z" horoda prohnano*<NTF>; *s" khdanskych" žytelej vzjato*<NTF> *dva miliony efimakov"*<ACC/NOM\_num>, *to est" taljarej bitych"*; feminine noun non-a-declension (2), e.g. *kotoromu tam" uže čest'*<ACC/NOM\_f\_non-a\_decl> *otdano*<NTF>; pl inan noun (7), e.g. *i vsě ynie prochie horody*<ACC/NOM\_pl\_inan> *i sela*<ACC/NOM\_pl\_inan> *zadněprovskie pravoje storony otdano*<NTF> *ljacham"*. Besides NTF is attested with mask anim in the NP (31), cf. *a Jakova Lyzohuba*<ACC\_m\_anim> *osoblyvo žalovano*<NTF> *i otpuščeno*<NTF> *v" Ukraynu; a druhoho hetmanyča molodšoho*<ACC\_m\_anim>, *Jacka, na Sybyr' zoslano*<NTF>; with pl anim (9), cf. *a mnohich" mahnatov"*<ACC\_pl\_anim> *v" ssylku pozasylano*<NTF>. NTF occurs with genitive of negation (3), e.g. *poneže ko ispovědi i syjaščennika*<GEN\_m\_anim> *ne dano*<NTF>. NTF is also attested with *ot"-PP* (1), e.g. *i poslano*<NTF> *z" vědomostju do Eho Carskaho Veličestva Ioanna*

*Aleksieviča ot" Šeremeta*<ot-PP> *knjazja Volkonskaho i ot" hetmana*<ot-PP> – *Evfima Lyzohuba*; as well as with inst agent/inst of means (2), cf. *kotoroho tělo pry osoblyvoj ceremoniy pohrebno*<NTF> *v" Soročyncach"*, [...] *archiepysskopom" kievskym" Rafaylom" Zaborovskym"*<INST>; *Tohda vsi požitky tamošnie krymskie i amunycja zabrany i vse žylie chanskoe razoreno*<NTF> *vojskami rossijskymy*<INST>. NTF co-occurs with past ru copula (3) in environment syncretic between nominative and accusative (2), and with an u-PP in the structure of one of them, cf. *a u neho*<u-PP> *mnoho*<ACC/NOM\_num> *veščej bylo*<COP\_past\_ru> *zapečatano*<NTF> *na dal'nich" peščerach" i poslē prodavano*<NTF> *po ukazu; hetmanstvo*<ACC/NOM\_n>, *kotoroe po obščemu vsch" želaniju bylo*<COP\_past\_ru> *emu vručeno*<NTF>. NTF is also attested with pl anim in the NP, co-occurring with past ru copula, cf. *a ich*"<ACC\_pl\_anim> *v" turmē zaključeno*<NTF> *bylo*<COP\_past\_ru> *na vremja*. Canonical passive (16) occurs predominantly with past ru copula (15) and is attested with past pol copula (1), e.g. *odnak" pomoščiju Božoju poběždeny zostali*<COP\_past\_pol> *švedy*. Canonical passive co-occurs with ot"-PP (2), e.g. *ot" kotoraho*<ot-PP>, [...] *ozloblen" byl" Chmel'nickij v" otnjatju chutora, pasěki i mlyna*.

Innokentij Gizel', the author of *Synopsys*, the text strongly influenced by Church Slavonic, and composed in the second half of the 17<sup>th</sup> c., prefers active narration mode over passive. Attested is PPP as aorist (2), e.g. *No vrazi kresta hospodnja, [...] hrěchami našymy pooščreny*<PPP\_stimulate\_pf>. The canonical passive (7) is used with aorist copula (3), e.g. *Hrad že Čyhyryn svobožden*<PPP\_free\_impf> *byst'*<COP\_aor> *ot vsjakich bēd*; as well as with imperfect copula (2), e.g. *A tyi ž narody tatarskiy, [...], prozvani*<PPP\_call\_pf> *bjachu*<COP\_imf> *ot traktov*; with pres ru copula (1), e.g. *Skity, tyi ž tatary, ot hory Skify narečenny*<PPP\_name\_pf> *sut'*<COP\_pres\_ru>; and with future ru copula (1), e.g. *Aščē kto ne budet*<COP\_fut\_ru> *ustavlenna*<PPP\_locate\_pf> *vremeně na rěčē Počajnoj, [...]*.



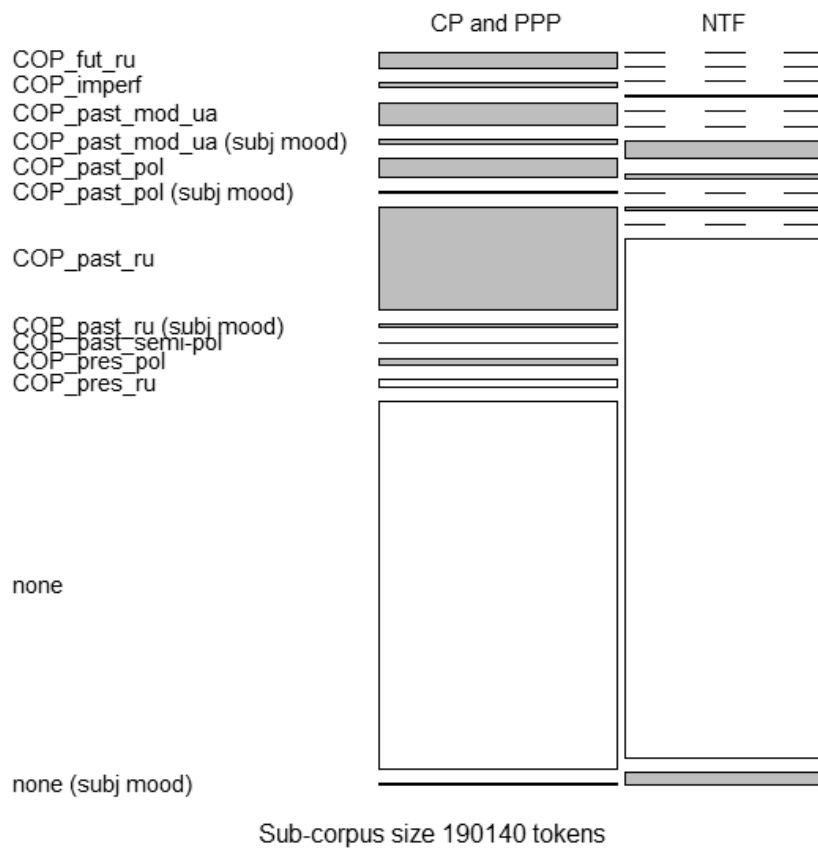
## Chart 6.1.2.a



- 1.1 *Litopys Samovydcja* [Eye Witness chronicle] (early 17<sup>th</sup> c.), 53,779 tokens
- 1.2 *Synopsis* [Sinopsis] (2<sup>nd</sup> half of the 17<sup>th</sup> c.), 6,716 tokens
- 1.3 *Litopys Samijla Velyčka* [Samijlo Velyčko's chronicle] (early 18<sup>th</sup> c.), 20,359 tokens
- 1.4 *Kratkoe opisanie Malorosii* [A Brief Description of Little Russia] (early-mid 18<sup>th</sup> c.), 29,939 tokens
- 1.5 *Lyzohubivs'kyj litopys* [Lyzohub chronicle] (1742), 20,417 tokens
- 1.6 *Litopys Hryhorija Hrabjanky* [Hrabjanka chronicle] (18<sup>th</sup> c.), 14,031 tokens
- 1.7 *Kratkoe ist. op. o Maloj Rossii* [A Brief Historical Description of Little Russia] (late 18<sup>th</sup> c.), 44,342 tokens
- 1.8 *Dobromysls'kyj litopys* [Dobromysl chronicle] (18<sup>th</sup> c.), 0,557 tokens

# Chart 6.1.2.b

## Copula Types in Cossack Writings



The data frame consists of 1011 observations of 2 variables. The independent variable “copula” has 13 levels. The table with numbers is below:

	COP_fut_ru	COP_imperf	COP_past_mod_ua	COP_past_mod_ua (subj mood)
CP and PPP	16	5	22	4
NTF	0	0	0	1

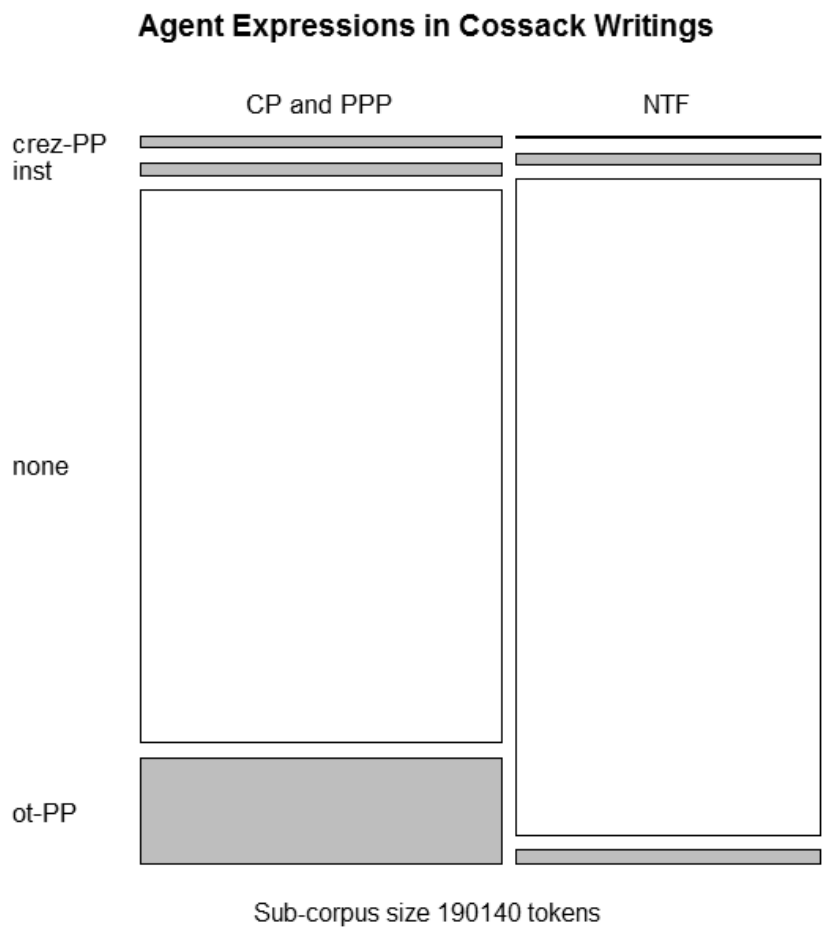
	COP_past_pol	COP_past_pol (subj m)	COP_past_ru	COP_past_ru (subj mood)
CP and PPP	19	1	100	4
NTF	0	0	15	4

	COP_past_semi-pol	COP_pres_pol	COP_pres_ru	none	none (subj mood)
CP and PPP	1	7	7	362	1
NTF	0	0	0	430	10

X-squared = 145.1944, df = 12,  $p$ -value < 2.2e-16

Chart 6.1.2.c

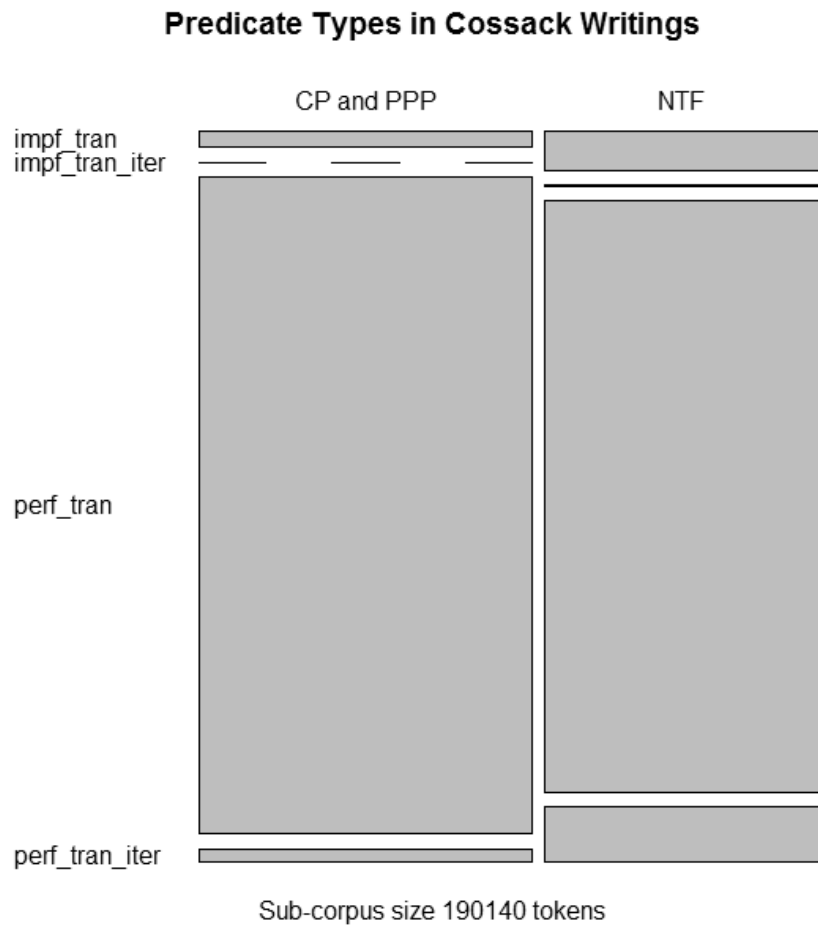


The data frame consists of 1011 observations of 2 variables. The independent factor “agent” has 4 levels. The table with numbers is below:

	crez-PP	inst	agent	none	ot-PP
CP and PPP	10	10		444	85
NTF	2	8		443	9

X-squared = 59.9609, df = 3, *p*-value = 5.992e-13; Fisher's *p*-value = 1.721e-15.

**Chart 6.1.2.d**

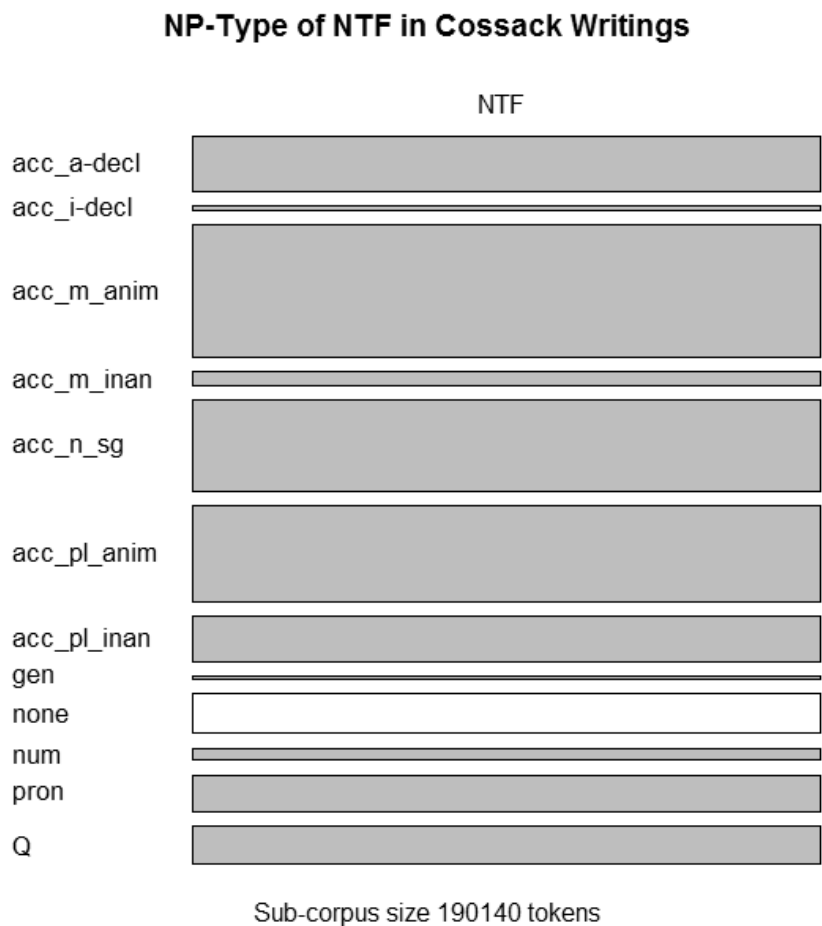


The data frame consists of 1011 observations of 2 variables. The independent factor “predicate” has 4 levels. The table with numbers is below:

	impf_tran	imperf_tran_iter	perf_tran	perf_tran_iter
CP and PPP	13	0	526	10
NTF	26	1	398	37

X-squared = 31.3209, df = 3,  $p$ -value = 7.276e-07; Fisher's  $p$ -value = 1.713e-07.

Chart 6.1.2.e



The data frame consists of 462 observations of 2 variables. The independent factor “NP” has 12 levels. The table with the numbers is below:

	acc_a-decl	acc_fem_non-a-decl	acc_m_anim	acc_m_inan	acc_n_sg
NTF	45	4	108	11	74

	acc_pl_anim	acc_pl_inan	gen	none	num	pron	Q
NTF	78	37	2	33	10	30	30

X-squared = 310.68, df = 11, *p*-value < 2.2e-16.

### Regression Analysis 5.3.2.f Cossack Writings Logistic Regression Model

lrm(formula = PPP\_or\_NTF ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Subjunctive\_mood + Copula:Agent + Copula:Predicate\_type +  
Subjunctive\_mood:Agent + Subjunctive\_mood:Predicate\_type + Agent:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value  $< 0,05$  is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood Ratio Test		Discrimination Indexes		Rank Discrim. Indexes	
Obs	1011	LR chi2	220.00	R2	0,26	C	0,73
NTF	461	d.f.	10	g	0,18	Dxy	0,45
CP and PPP	550	Pr(> chi2)	<0.0001	gr	0,6	gamma	0,76
max  deriv  0.003				gp	0,21	tau-a	0,22
				Brier	0,2		
		Coef	S.E.	Wald Z	Pr(> Z )		
Intercept		-0.1388	0.0781	-1.78	0.0755		
Copula		1.4191	0.2215	6.41	<0.0001		
Subjunctive_mood		-2.0813	0.9720	-2.14	0.0323		
Agent		0.9410	0.2107	4.47	<0.0001		
Predicate_type		-0.9623	0.2200	-4.37	<0.0001		
Copula * Subjunctive_mood		-0.0461	0.6257	-0.07	0.9412		
Copula * Agent		-0.3559	0.3760	-0.95	0.3438		
Copula * Predicate_type		5.5471	17.1515	0.32	0.7464		
Subjunctive_mood * Agent		10.4769	165.2416	0.06	0.9494		
Subjunctive_mood * Predicate_type		-6.1590	75.4532	-0.08	0.9349		
Agent * Predicate_type		-0.5631	0.7536	-0.75	0.4550		

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 133.87, df = 8,  $p$ -value  $< 2.2\text{e-}16$ .

Subjunctive\_mood: X-squared = 1.6275, df = 1,  $p$ -value = 0.202; Fisher's  $p$ -value = 0.1447.

Agent: X-squared = 59.64, df = 3,  $p$ -value =  $7.017\text{e-}13$ ; Fisher's  $p$ -value =  $1.984\text{e-}15$ .

Predicate\_type: X-squared = 31.544, df = 3,  $p$ -value =  $6.53\text{e-}07$ ; Fisher's  $p$ -value =  $1.574\text{e-}07$ .

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test indicates that the logistic regression model fits the data well. The Indexes C and Dxy testify that a dependent variable NTF\_or\_PPP can be predicted sufficiently well within the logistic regression model with independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood", but the model explains the data's variability poorly, since  $R^2$  coefficient is low. On the whole, the regression model seems to fit the Cossack set of data less well than the previous data set on Belorussian chronicles, since the value of  $R^2$ , one of the 3 coefficients we need to judge the efficiency of the model's predictions, is relatively low. The  $p$ -values for the Factors "Copula", "Agent", "Predicate\_type" and „Subjunctive\_mood“ in the second table are all small enough to reject the null hypothesis, or the statement that these factors do not contribute to the values of the variable NTF\_or\_PPP. The interactions between various factors within the model are not significant, since their  $p$ -values are too high. The  $p$ -values of the same factors in the independence tests are similar to the correspondent values inside the model, which fortifies the statements concerning the significance of the factors.

### 6.1.3. Diaries and memoirs 1725–1770 [5 texts; 124,361 tokens]<sup>111</sup>

The late 17<sup>th</sup> – early 18<sup>th</sup> c. has witnessed the rise of epistolary literature in (Central) Ukraine, usually written by Cossack elite. The content is mostly of private nature. Diaries report in chronological order about the activities, feelings and daily matters of their authors, and represent reliable sources of the language variety spoken in Central Ukraine in mid-18<sup>th</sup> c., the period when dialects of Central and Eastern Ukraine have been increasingly shaped by (Great) Russian. The majority of diaries are written in a variety of Russian used by upper class, not in Ukrainian vernacular. Shevelov (1991) describes this language variety, spoken by elite in the Cossack state Hetmanate and Sloboda Ukraine eastwards from it in mid- and late 18<sup>th</sup> c. as a “peculiar Russian that grew up on the Ukrainian substratum” (293).

In *Dnevnikъ heneral'nahô choružaho Nikolaja Chanenka* (1725-1742) the distribution of passivoid phenomena is as follows: PPP (420), CP (8), NTF (372 with object case; 1 with a retrievable null argument; 61 without a head noun). PPP as aorist (420) occurs with *od"/ot"-PP* (8), e.g. *hde dovol'no ot" sotnika hluchovskoho<ot-PP> traktovany<PPP>; ktoromu dana<PPP> ot" mene<ot-PP> koljaska dlja poezdu*; with *č(e)rez"-PP* (5), e.g. *Hospodin" polkovnik" dal" mně dva stohi sěna, kotorye na stepu pokazany<PPP> črez" armaša<črez"-PP>;* with *inst agent*, e.g. *Poslan" čajnik" mēdnyj v" 5 funtov", kotorij dělan"<PPP> Karpom" Kotljárom"<INST>*. Canonical passive occurs very seldom and exclusively with past *ru* copula (8), i.e. *Traktovany<NTF> byli<COP\_past\_ru> povčora hostě*. There are 3 records of nominative as objectcase in NTF, e.g. *za skopščinu vzjato<NTF\_take\_pf> u Kyselka kon'<NOM\_m\_anim> i kobyłka<NOM\_f\_a-decl>; u krestjatina Efima Vasylieva kupleno<NTF\_buy\_impf> bljudco<ACC/NOM\_n> i talěrka<NOM\_f\_a-decl> cěnovye za 40.k.; i poslano<NTF\_send\_pf> črez' Judenka šest' kožic" baranich" i plachta<NOM\_f\_a-decl>*. There are various 18<sup>th</sup> c. units of measurement in the NP (32) of NTF, e.g. *Kupleno<NTF\_buy\_impf> žyta osmačok<unit\_of\_measur>; poslano cukru holova<unit\_of\_measur>; dano<NTF\_give\_impf> žytnoj muky polusmak"<unit\_of\_measur>; bezmēn<unit\_of\_measur> sala, bezmēn<unit\_of\_measur> soli*. NTF occurs with *pl inan* in the NP (6), e.g. *publikovano<NTF\_publish\_impf> manifesty<ACC/NOM\_pl\_inan>;* *pl anim* in the NP (6), e.g. *pobrato<NTF\_take\_pf> ljudej našych"<ACC/GEN\_pl\_anim>;* with *mask inan* in the NP (1), e.g. *ktoromu dano<NTF\_give\_impf> ot" mene i memorial"<ACC/NOM\_m\_inan>;* frequently with a neuter noun/pronoun in the NP (76), e.g.

<sup>111</sup> We have included the prominent diaries below: *Dnevnikъ heneral'nahô choružaho Nikolaja Chanenka* (1725-1742), in extracts [The Diary of the General Cornet Nikolaj Chanenko (1725-142)], 45,585 tokens; *Dnevnikъ getmanskoj kanceljarii za 1722-1723 gody* [The Records of the Hetman's Office (1722-1723)], 19,440 tokens; *Dnevnikъ Petra Daniloviča Apostola* (May 1725-May 1727) [The Diary of Petro Danilovič Apostol (May 1725-May 1727)], 16,956 tokens; *Dnevnikъ Simeona Okol'skago* (1638) [The Diary of Simeon Okolski (1638)], 32,552 tokens (the text is a 1738 translation made by a Cossack attendant colonel S.V. Lukomskij from the Polish original published in Krakau in 1639); *Zapiski Tymofeja Titlovskago* (1620-1621) [The Notes of Tymofej Titlovskij 1620-1621], 9,828 tokens (The text is a 1770 translation of the Polish historian T. Titlovski made by Stefanъ Vasilevъ, the son of Cossack attendant colonel S.V. Lukomskij).

*Odpravleno*<NTF\_perform\_pf> *krešćenie*<ACC/NOM\_n\_sg> *synu*; *Kupleno*<NTF\_buy\_impf> *do dvora to derevo*<ACC/NOM\_n\_sg>; *dano*<NTF\_give\_impf> *srěbro*<ACC/NOM\_n\_sg> *Antonu zolotarju*; with mask anim noun in the NP (10), cf. *da emu ž" Dacku konja*<ACC\_m\_anim> *syvoho lubenskoho dano*<NTF\_give\_impf>; *i zjatja*<ACC\_m\_anim> *eho oboslano*<NTF\_send\_pf> *z" domu moeho drobnoju, chlébom" i vodkoju*. There are 12 records of NTF with morphologically unambiguous accusative case, i.e. with a noun of *a*-declension, e.g. *i poslano*<NTF\_send\_pf> *cukru holovu*<ACC\_a-decl>, *paper" i surhuč"*; *Privezeno*<NTF\_bring\_pf> *z" Tovkačovky 19 ovčyn" čynenych" i škuru*<ACC\_a-decl> *driganta voronoho*; *Za lečenie chlopca šoludyvoho zaplačeno*<NTF\_pay\_pf> *teper' poltynu*<ACC\_a-decl>. Due to the private nature of this diary, the most frequent NP denotes the currency (217), e.g. *Dano*<NTF\_give\_impf> *čěljuryku 4 k.*<currency>; *Vzjato*<NTF\_take\_pf> *u Nozdri 10 r.*<currency>. Such NTF records are attested with *od"/ot"-PP* (9), e.g. *Oboslano*<NTF\_send\_pf> *nas"*<ACC\_pl\_anim> *uzvarom" ot" p. Iskryckoho*<od"-PP> *radi roždenija dočeri eho Tatiany*; *i dano*<NTF\_give\_impf> *od" panei*<od"-PP> *30 k., od" mene*<od"-PP> *50 k.*. NTF also occurs with *inst of agent* (1), e.g. *vina bočku stračeno*<NTF\_use\_up\_pf> *Iosyfom"*<INST>. NTF occurs with *past ru copula* (2) in the environment synchronic between personal and impersonal reading, cf. *admiraltejstvo ubrano*<NTF> *bylo*<AUX> *fonarjami*; *dano sukno na rjasu, toe čto bylo*<AUX> *dlja Efimichi kupleno*<NTF>.

The passivoid phenomena in *Dnevnikъ getmanskoj kanceljarii za 1722-1723 gody* are distributed as follows: PPP (165), CP (40) and NTF (48 with object case; 91 without a head noun).

PPP (165) is attested with *črez"-PP* (1), e.g. *prineseny*<PPP\_bring\_pf> *dva ukaza [...] črez"*<črez"-PP> *kuriera knjazja*. CP (40) occurs with a *future ru copula* (20), *past ru copula* (18), *past pol copula* (2). There are 3 records of NTF with an unambiguously accusative object case, e.g. *onuju protestaciju*<ACC\_a-decl> *v" diariuš" zapisano*<NTF\_put\_down\_pf>; *kotoroj kopiju*<ACC\_a-decl> *do p. polkovnika poslano*<NTF\_send\_pf>. In the NP of NTF there is a *neuter noun/pronoun* (26), cf. *pozdravlenie*<ACC/NOM\_n\_sg> *voskresenskich" svjat" zaslano*<NTF\_send\_pf>; *Pri sem"* *vyraženo*<NTF\_express\_pf> *blahodarstvie*<ACC/NOM\_n\_sg>; *pl anim* in the NP (3), e.g. *i suženo*<NTF\_judge\_impf> *b" onych"*<ACC\_pl\_anim> *bez" vsjakich" prihotej, [...], vinnych*<ACC\_pl\_anim> *karano*<NTF\_punish\_pf>; *esliby ich"*<ACC\_pl\_anim> *na Moskvě ostavleno*<NTF\_leave\_pf>; *mask anim* as a *head noun* (3), partially co-occurring with a *modal particle žeby*, cf. *žeby eho*<ACC\_m\_anim> *ot" Terskoho pochodu radi slabosti zdorovja uvolneno*<NTF\_dismiss\_pf>; *Zaslano*<NTF\_send\_pf> *lystom" p. bunčučnoho*<ACC\_m\_anim> *eneralnoho*; *mask inan* (1), cf. *spisok"*<ACC/NOM\_m\_inan> *onych" prislano*<NTF\_send\_pf>; *numeral phrase* (1), e.g. *takož" skolk*<num> *jakoho roku toj denežnoj povinnosti vybrano*<NTF\_withdraw\_pf>. NTF is attested with *past ru* (4) and *future ru copula* (2), partially co-occurring with complementizers *žeby*, *aby* and *daby*. However, since all records have a *neuter noun/pronoun*



in the NP, they can all be agreeing passives, cf. *žeby toe*<ACC/NOM\_pron> *bylo*<COP\_past\_ru> *zapisano*; *aby onoe* [...] *novoho hetmana izbranie*<ACC/NOM\_n> *bylo*<COP\_past\_ru> *ispolneno*<NTF\_take place\_pf>; *daby* [...] *opredelenie*<ACC/NOM\_n> *bylo*<COP\_past\_ru> *odstavleno*<NTF\_take back\_pf>.

In *Dnevnikъ Petra Daniloviča Apostola* the distribution is as follows: CP(17), PPP(4), NTF (9 with object case; 1 without a head noun). CP (17) occurs with inst agent (1), e.g. *V'' tot'' že den' mně byl'' sdělan''*<PPP> *vizit'' polkovnikom'' Ivanenko*<INST> *i hospožej Savič''*<INST>. There are 4 exx of PPP as aorist, e.g. *Ljarskij otpravljen''*<PPP\_send\_pf> *v'' ssylku*. NTF is attested with a neuter noun or pronoun in the NP (6), e.g. *Predano*<NTF\_give\_pf> *zemlě tělo*<ACC/NOM\_n\_sg> *pokojnaho Otte*; numeral phrase in the NP (3), e.g. *V'' Savincach'' posějano*<NTF\_sow\_pf>: *ržy 4½*<NUM> *os'mačky v'' dvuch'' městach''*; *ovsa 2*<NUM> *os'mačky, konopli 4*<NUM> *měška, l'na 13*<NUM> *měškov''*; *Zděs' i na chutorach'' pribavleno*<NTF\_add\_pf> *2*<NUM> *raciona*. NTF occurs with past ru copula (3), but only in the environment ambiguous between nominative and accusative, e.g. *no ich'' dělo*<ACC/NOM\_n\_sg> *bylo*<COP\_past\_ru> *otloženo*<NTF\_postpone\_pf>; *iz'' kotorych'' bol'synstvo*<ACC/NOM\_num-like\_n> *bylo*<COP\_past\_ru> *nakazano*<NTF\_punish\_pf> *knutami*.

In *Dnevnikъ Simeona Okol'skago* the NTF construction by far outnumbers other construction types, cf. CP (14), PPP (29) and NTF (158 with a head noun; 9 without a head noun). CP (14) occurs with past ru copula (11); with past pol copula (2); and with a modified, or hybrid ru copula (1), e.g. *kotoraho bylismy*<COP\_past\_ru\_hyb> *dnja onohdajšoho prez'' universal'' vašoj milosti našoho pana potěšeny*<PPP\_please\_pf>. CP (14) is attested with ot''-PP (1), e.g. *aby ne byl'' ot'' kozakov''*<ot-PP> *hetmanu vydan'' holovoju*. PPP (29) occurs with ot''-PP (4) as well, cf. *Putyvec'' i Rěpka otđany Poljakam ot'' svoich''*<ot-PP>; *Bohdan'' Chmělnyckij* [...] *vybran'' ot'' vojska zaporozskoho*<ot-PP>; as well as with prez''-PP (2), cf. *i vykonana prez'' každoho*<prez''-PP> *z'' osobna prysjahy rota*. NTF occurs with a-declension nouns in the NP (11), e.g. *iž'' tuju eho prysluhu*<ACC\_a-decl> *zdradectvom'' okryčeno*<NTF\_accuse\_pf>; *aby im'' armatu*<ACC\_a-decl>, *vzjatuju pod'' Kumejkamy verneno*<NTF\_give back\_impf>; *aby nad'' nym'' z'' druhymy usypano*<NTF\_raise\_pf> *mohylu*<ACC\_a-decl>. Besides there is a neuter noun/pronoun in the NP (14), e.g. *pole*<ACC/NOM\_n> *aby dano*<NTF\_give\_impf>; mask anim in the NP (52), e.g. *pana Krasnosělskoho*<ACC\_mask\_anim> *raneno*<NTF\_injure\_impf>; *konja*<ACC\_mask\_anim> *zabito*<NTF\_kill\_pf>; numeral phrase in the NP (57), e.g. *znajdeno*<NTF\_find\_pf> *kozakov'' 130*<NUM>; *vyslano*<NTF\_send\_pf> *kilka*<Q> *chorohvej z'' reestrovymy*; mask inan in the NP (3), e.g. *Zobrano*<NTF\_gather\_pf> *chlěb''*<ACC/NOM\_mask\_inan>; pl anim in the NP (5), cf. *ale ich''*<ACC\_pl\_anim> *zraženo*<NTF\_betray\_pf> *s'' fortelju*; pl inan (4), e.g. *zaprovaženo*<NTF\_introduce\_pf> *armaty*<ACC/NOM\_pl-inan>. NTF occurs with od''/ot''-PP (3), e.g. *kotoriy to vesi, od''*<ot-PP> *eho milosty pana Ljašča ad male narrata uprošeno*<NTF\_beg\_pf>; *ot'' vojska Ostranynovoho kozackoho*<ot-PP> [...] *zabyto*<NTF\_kill\_pf> *Poljakov'' roznoho gatunku*; with črez''-PP (1), e.g. *črez''*

*kotoroho*<črez"-PP> *toe nevolnickoe jarmo ljadzko* [...] *zverženo*. NTF occurs with past ru copula (2), in the environment syncretic between nominative and accusative, co-occurring either with a complementizer *aby* or with a complementizer *žeby*, e.g. *aby toe nam" milostive bylo*<COP\_past\_ru> *stverženo*<NTF>; *žeby toe zneseno*<NTF> *bylo*<COP\_past\_ru>.

In *Zapiski Tymofeja Titlovskago* the distribution is the following: PPP (22), CP (12) and NTF (22 with a head noun; 4 without a head noun). PPP (22) is attested with an inst by-phrase (4), e.g. *po hetmaně Koškě izbran" Kozakami*<INST> *hetmanom" Borodavka*; with ot"-PP (4), e.g. *On", Sahajdačnij, hetmanom" ot" kozakov"*<ot-PP> *izbran"*. CP (12) occurs with both past ru copula (10) and future ru copula (2). NTF is attested with numeral phrase in the NP (12), e.g. *50*<NUM> *čelověk ubito*<NTF\_kill\_pf>, *a 30*<NUM> *raneno*<NTF\_injure\_impf>; with neuter noun/pronoun in the NP (6), e.g. *i toe starostvo*<ACC/NOM\_n> *voevodě Ruskomu*, [...] *žalovano*<NTF\_bestow\_pf>; pl anim in the NP (2), e.g. *mnohich"*<ACC\_pl\_anim> *raneno*<NTF\_injure\_impf>. NTF occurs with past ru copula (1), e.g. *čtob" vojsko zaporožskoe ukrainskoe soderžymo i sochranjaemo bylo*<COP\_past\_ru> *pri svoich" pravach"*; and with future ru copula (1), e.g. *esli sie ot" kakoj nibud' storony razorvano*<NTF> *ne budet"*<COP\_future\_ru>. Besides NTF occurs with inst agent (1) in the structure, e.g. *tělo eho pravoslavnym" mytropolytom kievskym"*, *Iovom" Boreckym"*<INST> *čestno pohrebena*<NTF>.

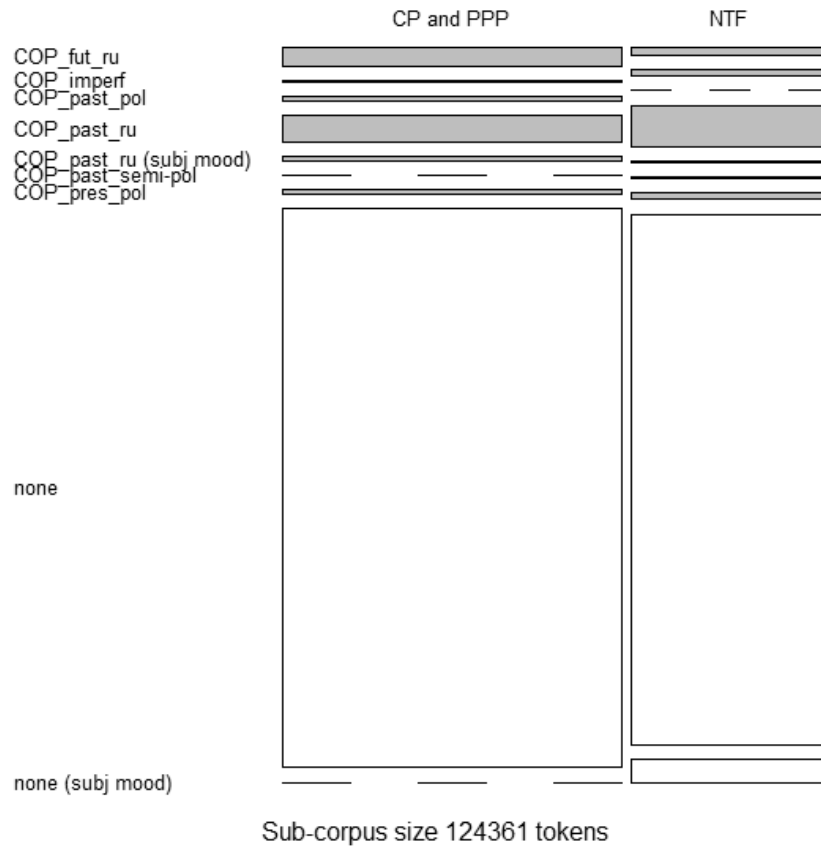
# Chart 6.1.3.a



- 1.1 *Dnevnikъ getmanskoj kanceljarii* (1722-1723) [The Records of the Hetman's Office] (early 17<sup>th</sup> c.), 19,440 tokens
- 1.2 *Dnevnikъ Apostola* (May 1725-May 1727) [The Diary of Petro Danilovič Apostol] (2<sup>nd</sup> half of the 17<sup>th</sup> c.), 16,956 tokens
- 1.3 *Dnevnikъ Simeona Okol'skago* (1638) [The Diary of Simeon Okolski] (a 1738 translation made by a Cossack attendant colonel S.V. Lukomskij from the Polish original published in Krakau in 1639)(early 18<sup>th</sup> c.), 32,552 tokens
- 1.4 *Dnevnikъ Nikolaja Chanenka* (1725-142) [The Diary of the General Cornet Nikolaj Chanenko] (early-mid 18<sup>th</sup> c.), 45,585 tokens
- 1.5 *Zapiski Tymofeja Titlovskago* (1620-1621) [The Notes of Tymofej Titlovskij] (The text is a 1770 translation of the Polish historian T. Titlovski made by Stefanъ Vasilevъ, the son of Cossack attendant colonel S.V. Lukomskij), 9,828 tokens

# Chart 6.1.3.b

## Copula types in Diaries and Memoirs



The data frame consists of 1112 observations of 2 variables. The independent factor “copula” has 9 levels. The table with numbers is below:

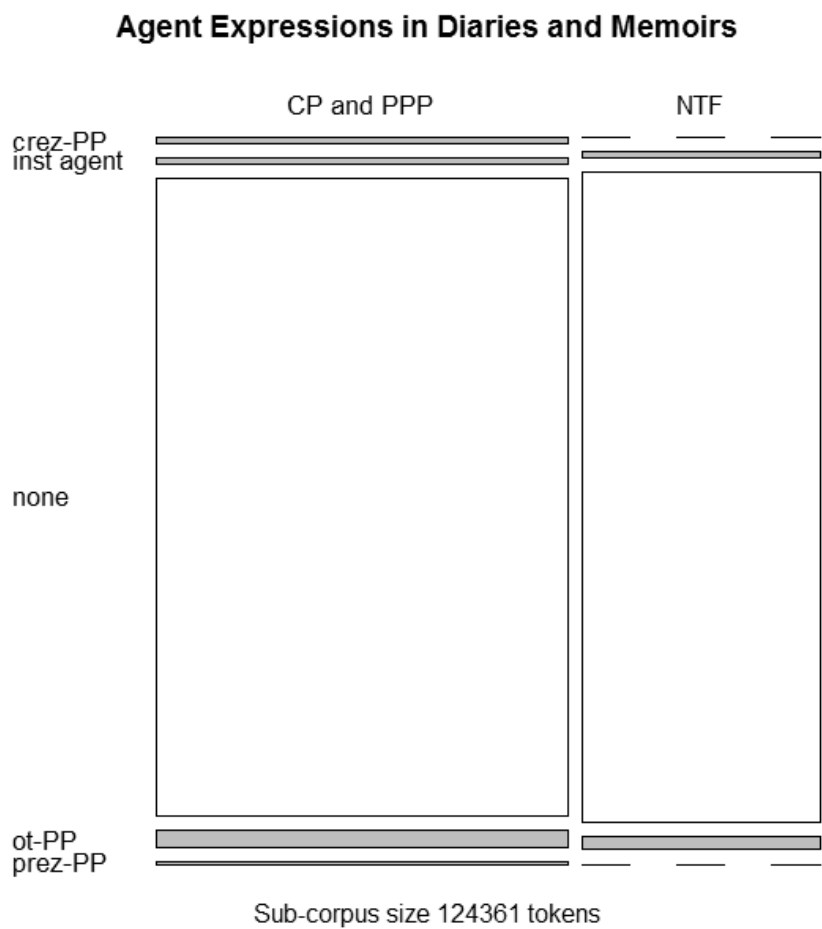
	COP_fut_ru	COP_imperf	COP_past_pol	COP_past_ru	COP_past_ru(subj mood)
CP and PPP	21	1	5	31	4
NTF	5	4	0	27	1

	COP_past_semi-pol	COP_pres_pol	none	none (subj mood)
CP and PPP	0	5	638	0
NTF	1	4	350	15

X-squared = 41.9366, df = 8, *p*-value = 1.392e-06.

Chart 6.1.3.c

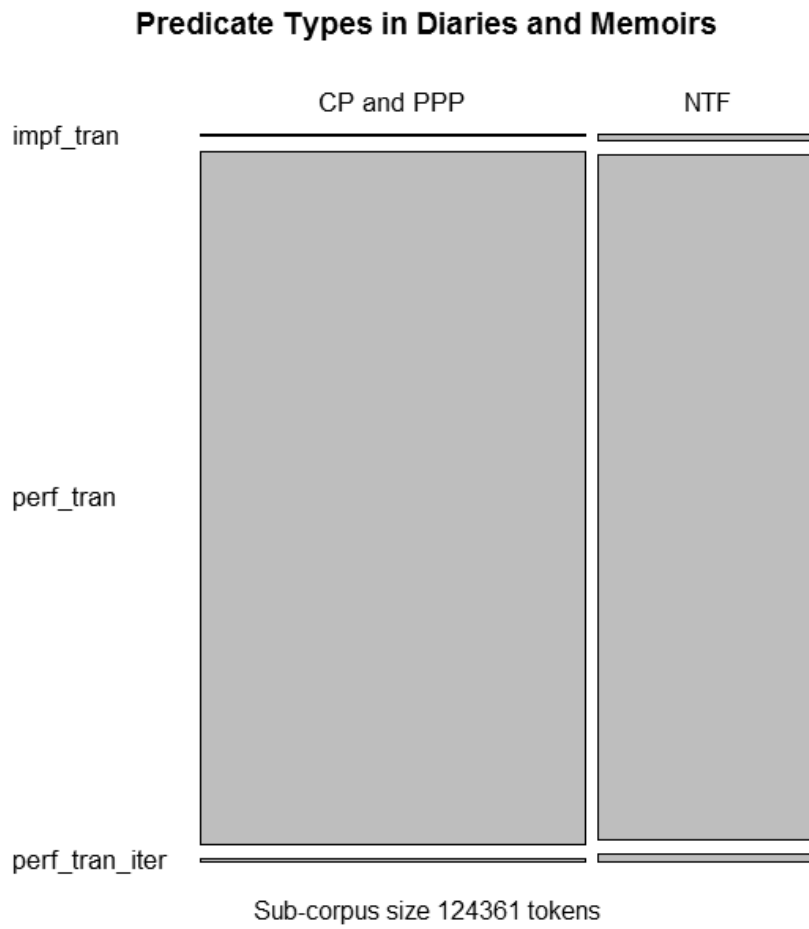


The data frame consists of 1112 observations of 2 variables. The independent factor “agent” has 5 levels. The table with numbers is below:

	crez_PP	inst agent	none	ot/od-PP	prez-PP
CP and PPP	7	6	672	18	2
NTF	0	4	395	8	0

X-squared = 5.7073, df = 4, *p*-value = 0.2221; Fisher's *p*-value = 0.2205.

## Chart 6.1.3.d

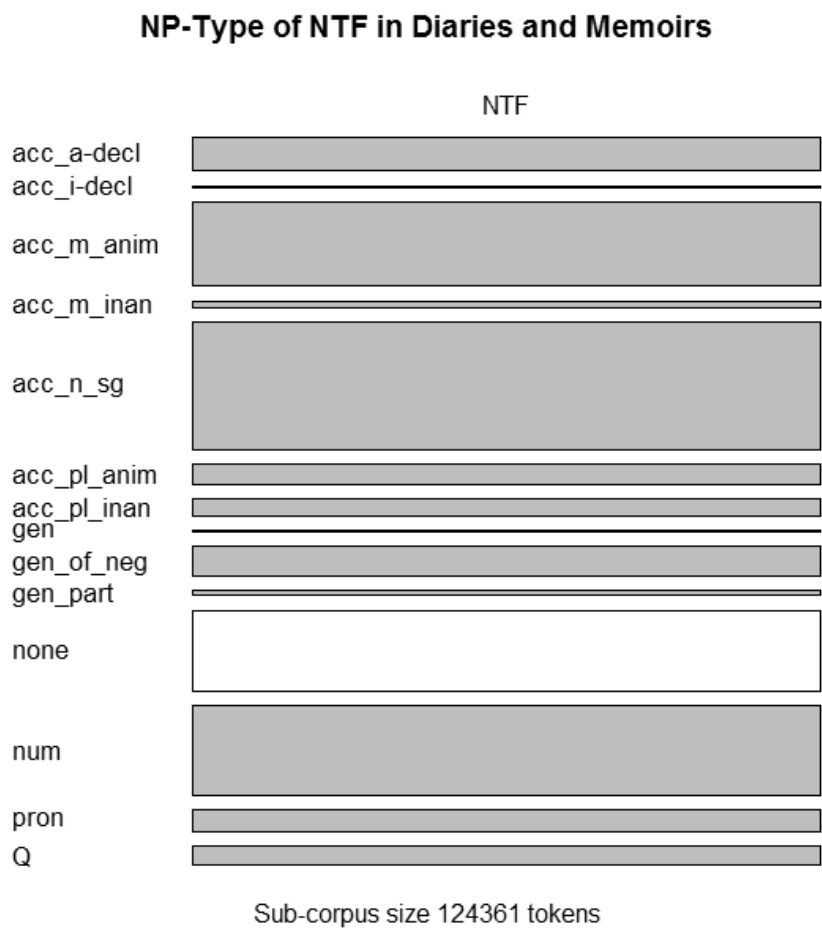


The data frame consists of 1112 observations of 2 variables. The independent factor “predicate” has 3 levels. The table with numbers is below:

	impf_tran	perf_tran	perf_tran_iter
CP and PPP	3	700	2
NTF	4	399	4

X-squared = 3.6515, df = 2,  $p$ -value = 0.1611; Fisher's  $p$ -value = 0.1514.

Chart 5.3.3.e



The data frame consists of 407 observations of 2 variables. The independent factor “NP” has 14 levels. The table with numbers is below:

	acc_a-decl	acc_i-decl	acc_m_anim	acc_m_inan	acc_n_sg									
NTF	26	2	63	5	97									
						acc_pl_anim	acc_pl_inan	gen	gen_of_neg	gen_part	none	num	pron	Q
NTF	15					13		1	22	4	61	68	16	14

X-squared = 410.81, df = 13, p-value < 2.2e-16.

### Regression Analysis 5.3.3.f Diaries and Memoirs Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Subjunctive\_mood + Copula:Agent + Copula:Predicate\_type +  
Subjunctive\_mood:Agent)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood Ratio Test		Discrimination Indexes		Rank Discrim. Indexes	
Obs	1112	LR chi2	47.35	R2	0.057	C	0,53
NTF	407	d.f.	8	g	0.422	Dxy	0.067
PPP and CP705		Pr(> chi2)	<0.0001	gr	1.525	gamma	0.225
max	deriv  0.001			gp	0.042	tau-a	0.031
				Brier	0.223		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	0.5702	0.0674	8.46	<0.0001
Copula	0.0260	0.0604	0.43	0.6667
Subjunctive_mood	-9.9233	27.7328	-0.36	0.7205
Agent	0.3714	0.1888	1.97	0.0491
Predicate_type	-1.3668	0.5816	-2.35	0.0188
Copula * Subjunctive_mood	3.4579	9.2524	0.37	0.7086
Copula * Agent	-0.3168	0.2343	-1.35	0.1764
Copula * Predicate_type	1.8986	12.3675	0.15	0.8780
Subjunctive_mood * Agent	4.6827	52.4718	0.09	0.9289

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 13.986, df = 6,  $p$ -value = 0.02979; Fisher's  $p$ -value = 0.02101.

Subjunctive\_mood: X-squared = 14.681, df = 1,  $p$ -value = 0.0001273; Fisher's  $p$ -value = 8.111e-05.

Agent: X-squared = 5.7073, df = 4,  $p$ -value = 0.2221; Fisher's  $p$ -value = 0.2205.

Predicate\_type: X-squared = 3.6515, df = 2,  $p$ -value = 0.1611; Fisher's  $p$ -value = 0.1514.

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test indicates that on the whole the logistic regression model fits the data well. Still, the given regression model does not predict the observed data well enough, since the coefficients  $R^2$  and Dxy have very small values. Even if we take the least significant factors out of the model, the coefficients  $R^2$ , C and Dxy stay low. However, the model reflects the general tendencies of the data distribution: the low  $p$ -values of „Agent“ and „Predicate\_type“ speak for the significance of these Factors. The high  $p$ -values of the Factor „Copula“ and „Subjunctive\_mood“, as well as of their interactions demonstrate that the corresponding Factors have no significant influence on the observed data within the regression model. In contrast to the previous data sets, that exhibit relatively uniform  $p$ -values for factors within the model and in the independence tests, the corresponding  $p$ -values in this data set differ considerably. The results indicate that the Factors Copula and Subjunctive\_mood are significant for the values of the variable NTF\_or\_PPP, but not in the specific setting of the logistic model, which does not take their significance into account.



#### 6.1.4. Semi-secular religious polemics of 1500s–early 1600s [15 texts; 118,491 tokens]<sup>112</sup>

The next group is comprised of predominantly short texts that can be described as semi-secular religious polemic of 16<sup>th</sup> and early 17<sup>th</sup> c., and at the same time as the beginnings of the Baroque era. According to Čyževs'kyj (1997), Baroque literature and culture in Ukraine must have had both a religious and a secular domain (262). Still, even in the late Baroque era of the 18<sup>th</sup> c., religious topics still dominate the content (274). The late 16<sup>th</sup>-mid-17<sup>th</sup> c. semi-secular polemical literature has evolved from the religious polemic of the previous century, and symbolizes the transfer to the Ukrainian Baroque with its upcoming zenith in the 18<sup>th</sup> c. The literary value of such mixed, or syncretic literature lies in its didactic function and striving for obtaining knowledge. As most of the works of the Middle period, these texts manifest a high level of morphological variation.

In *Apokrys* PPP (6) occurs with a čerez-PP (1), e.g. *otповід' [...] čerez Christofora Filjaleta*<čerez-PP> *vrychlě dana*; and with ot-PP (1), e.g. *Kotorye to vsě urazy, ot honitelej rimskoho vyznan'ja*<ot-PP> *otkošenyje*. CP (13) occurs with present ru copula (6), present pol copula (1), e.g. *esteste*<COP\_pol\_pres> *obovjazani*; with future ru copula (1), and past ru copula (5). Besides CP is attested with ot-PP (3), e.g. *Kotoryj korol' budet koronovan ot perednějšoho archijepiskopa*<ot-PP>; *aby byl konečne potvrženyj ot najvyššeho biskupa*<ot-PP>. NTF (4) is attested with neuter noun in the NP (1), e.g. *prydano*<NTF> *ono roskazan'e*<ACC/NOM\_n\_sg>; mask anim in the NP (1), e.g. *jak hreka Nykyfora*<ACC/GEN\_m\_sg>, [...], *arestovano*<NTF>; mask inan in the NP (1); and pl anim in the NP (1).

In *Kazan'je svjatocho Kyryla, patriarchy ijerusalymskoho, o antichristě i znakach jeho*. CP (4) is attested with present ru copula (1), past ru copula (1) and future ru copula (2). PPP as aorist (1) occurs with ot-PP, e.g. *ot ljudej*<ot-PP> *vzhorženy*<PPP> *i osmějany*<PPP>. NTF (1) is attested with a neuter pronoun, syncretic between nominative and accusative, and a pres ru

<sup>112</sup>The following texts have been incorporated into the corpus: *Apokrys* [The Answer (gr. ἀποκρίσις)] by Chrystofor Filalet, 7,479 tokens; *Kazan'je svjatocho Kyryla, patriarchy ijerusalymskoho, o antichristě i znakach jeho* [The Story Told by the Holy Kyrillos, the Patriarch of Jerusalem, about the Antichrist and his Signs] by Stefan Zyzanij, 1,892 tokens; *Ključ carstva nebesnoho* [The Key to the Kingdom of Heaven] by Herasym Smotryč'kyj, 10,236 tokens; *Knyžka* [The Book] by Ivan Vyšens'kyj, 31,393 tokens; *Nauka al'bo sposob zložennja kazannja* [The Doctrine or the Method of Narration] by Ioanykij Haljatovs'kyj, 12,317 tokens; *O jedinoj istinnoj pravoslavnoj věřě* [About the Only Authentic Orthodox Faith] by Vasyl' Suraz'kyj, better known as Vasyl' Ostroz'kyj, 5,653 tokens; *Otpys na druhij lyst velebnoho otca Ypatija* [The Answer to the Second Letter of the Honorable Father Ipatij] by Kliryk Ostroz'kyj, 4,031 tokens; *Otpys na lyst v božě velebnoho otca Ypatija* [The Answer to the Letter of the Honorable Father Ipatij] by Kliryk Ostroz'kyj, 4,784 tokens; *Palinodija* (gr. παλινῳδία) [The Renunciation] by Zacharija Kopystens'kyj, 6,689 tokens; *Perestoroha* [Warning] by unknown author, 19,503 tokens; *Poslannja do Domniky* [Epistle to Domnika] by Ivan Vyšens'kyj, 3,502 tokens; *Poslannja Iovu Knjahynyc'komu* [Epistle to Iov Knjahynyc'kyj] by Ivan Vyšens'kyj, 453 tokens; *Slovo 1-e času vojny* [The First Word in the Wartime] by Antonij Radyvylov's'kyj, 2,590 tokens; *Slovo* [The Word] by unknown author, 1,200 tokens; *Ystorija o Lystrykijskom, to jest' o razbojničeskom Ferarskom, abo Florenskom sinode* [The story about the Lystrykijski, that is about the Predatory Ferarskij, or the Synod of Florence], by Ivan Vyšens'kyj, 6,769 tokens.

copula in the structure, e.g. *što*<ACC/NOM\_pron> *ti perše v pis'mě jest*<COP\_pres\_ru> *oznajmeno*<NTF>.

In *Ključ carstva nebesnoho*, PPP as aorist (2) is attested with ot-PP (2), e.g. *i ot rodičov pravověrných*<ot-PP> *izbran*<PPP>. CP (14) is attested with present ru copula (9), with past ru copula (4), with future ru copula (1). Besides, CP occurs with ot-PP (4), e.g. *že ot samoho boha*<ot-PP> *sut'*<COP\_pres\_ru> *postavleny*<PPP>. NTF (11 with a head noun, 2 without a head noun) occurs with a neuter pronoun in the NP (7), a form syncretic between nominative and accusative, e.g. *kotorym to*<ACC/NOM\_pron> *pověřeno*<NTF>; as well as with pl anim in the NP (1), e.g. *tedy tak tež ich*<ACC/GEN\_pl\_anim> *i otopřavljano*<NTF>. NTF is attested with present ru copula (1), e.g. *bystro skačučije zvěři i vse inoje pod nohi jemu jest*<COP\_pres\_ru> *pokoreno*<NTF>.

In *Knyžka*, PPP as aorist (12) occurs with ot-PP (2), e.g. *ot ducha*<ot-PP> *svjatoho postavlennyi*. CP (34) is attested with present ru copula (16), past ru copula (4), future ru copula (14). CP occurs with ot-PP (9), e.g. *jako esi okraden ot toho zloděja*<ot-PP>, *što chitro rovy ryet i jamy podkopyvaet; i ot boha otvržen byl; da ne ubita budet nahlo duša ot razbojnikov*<ot-PP>. NTF (3) occurs with a neuter noun in the NP (2), e.g. *i smertiju konečno carstvo*<ACC/NOM\_n\_sg> *tvoe lukavoe mira seho obvaženo*<NTF> *i pokazano*<NTF>; with pl anim in the NP (1), e.g. *i vas*<ACC/GEN\_pron> *hde uzakoneno*<NTF>. NTF is attested with a future ru copula (1), which in fact might be an instance of canonical passive, e.g. *da ne ukradeno*<NTF> *budet*<COP\_fut\_ru> *duševnoe bohatstvo*<ACC/NOM\_n\_sg>.

In *O jedinój istinnoj pravoslavnoj věřě* CP (9) occurs with aorist copula (3), present ru copula (3), future ru copula (4) and past ru copula (1). CP is attested with ot-PP (1), i.e.: *za što sut' ot mudrych žydov*<ot-PP> *han'beni*. The PPP as aorist is attested only once, e.g. *iž v četvertyj den' luna sotvorena*<PPP>. NTF (6) occurs with a neuter noun/pronoun in the NP (3), and co-occurs with a present ru (1) and a future ru (1) copula, e.g. *zakryto blahověstvovanije naše; kotoroje*<ACC/NOM\_n\_sg> *jest'*<COP\_pres\_ru> *naperedě napisano*<NTF>; *dělo*<ACC/NOM\_n\_sg> *javleno*<NTF> *budjet*<COP\_fut\_ru>; mask anim in the NP (2), e.g. *jehože*<ACC/GEN\_m\_anim> *vysokostom nazvano*<NTF>; quantifier/numeral-like noun in the NP (1), e.g. *i jemu že množaje*<Q> *dano*<NTF>. NTF is also attested with ot-PP (1), cf. *jeho že [...] ot nas*<ot-PP> [...] *napisano*<NTF>.

In *Otpys na druhij lyst velebného otca Ypatija* CP (3) occurs with ot-PP (2), e.g. *Jako ot vas*<ot-PP> *ne jest prestupleny ovyje [...] kanony*. NTF (1) is attested with present ru copula and ot-PP, i.e. *Jakož ovo*<ACC/NOM\_n\_sg> *ot vas*<ot-PP> *ne jest*<COP\_pres\_ru> *narušono*<NTF>. NTF is also attested in the attributive function (2), e.g. *majut nebo, nevymovnoju zvězd ozdoboju ukrašeno*<NTF\_attr>; *dobro li jest' zloto iz ržeju měšeno*<NTF\_attr>.

In *Otpys na lyst v Božě velebného otca Ypatija* there are 7 records of PPP as aorist. CP (6) occurs with a future ru copula (2), present ru copula (2), past ru copula (1) and aorist

copula (1). CP is attested with ot-PP (1), e.g. *iž kandijskije trekove znevoleny jest ot vlochov*<ot-PP> *abo ot venetov*<ot-PP> *prez měč*. NTF (8) is attested with pl anim in the NP (6), e.g. *že odnych*<ACC/GEN\_pl\_anim> *dušeno*<NTF>; *druhych*<ACC/GEN\_pl\_anim> *davleno*<NTF>; *druhych*<ACC/GEN\_pl\_anim> *holodom moreno*<NTF>; *vezen'jem trapleno*<NTF>; *inšych*<ACC/GEN\_pl\_anim> *topleno*<NTF>; with neuter noun in the NP (1), e.g. *Nasěn'je*<ACC/NOM\_n\_sg> *dobroti vsějano*<NTF> *čelověku*; with mask inan in the NP (1), e.g. *Prirožen'ju ljudskomu vsějano*<NTF> *i hněv*<ACC/NOM\_m\_inan>.

In *Poslannja do Domniky* CP (5) occurs with past ru copula (3) and future ru copula (2). CP is attested with ot-PP (1), e.g. *ot satany*<ot-PP> *svjazan byl*. There is PPP as aorist (1), i.e. *sramotně nah povešen*<PPP>. NTF (1 with object case; 1 without a head noun) is used as attribute, cf. *jako pan Jurko, vedjašče estestvo čelověčeskoe nemoščno sušče, strastno, hrěšno i vsěmi uzami aernych duchov zloby zvjazano*<NTF\_attr>.

In *Perestoroha* the NTF (44) prevails over PPP (32) and CP (23). The od-PP is more numerous with PPP (6) than with NTF (2). Present ru copula (6) is used exclusively with PPP. Out of 2 future copulas, one of them is used with a NP-less -no, -to construction, another with a PPP construction, cf. *Ščo zv'jažeš na zemli, budet*<COP\_fut\_ru> *zv'jazano*<NTF> *na nebesi; izhnan*<PPP> *budet*<COP\_fut\_ru> *von*. There are 6 NTF records with mask anim in the NPs, e.g. *Tohdy joho*<ACC/GEN\_m\_anim> *zrajceju učyneno*<NTF>; 6 NTF with pl inan in the NP, e.g. *sobory*<ACC/NOM\_pl\_inan> *duhovniji čyneno*<NTF>; and 3 NTF records with pl anim in the NP, cf. *i zlych*<ACC/GEN\_pl\_anim> *karano*<NTF>. There is 1 record for quantifier/numerical phrase in the NP of the NTF construction, i.e. *že vysaženo*<NTF> [...] *osob kil'kanajcet'*<Q>. There is one record for a-declension in the structure of -no, -to, cf. *I spravu*<ACC\_a-decl> *vsju cerkovnuju rozorvano*<NTF> *i znevoleno*<NTF>. If by this time the accusative-genitive paradigms for animate and inanimate nouns had been driven apart, there are records for nominative as object case. At any rate, there are both old nominative-accusative and genitive accusative forms used in one sentence, cf. *Rozkazannjem vselens'koho patriarcha dvoženci*<NOM/ACC\_pl\_anim> *vyvolano*<NTF>, *jeresi*<NOM/ACC\_pl\_anim> *vykljato*<NTF>, *spovidnyky*<NOM/ACC\_pl\_anim> *ustavleno*<NTF>, *sobory*<NOM/ACC\_pl\_inan> *duhovniji čyneno*<NTF>, *sudy*<NOM/ACC\_pl\_inan> *suženo*<NTF> *i zlych*<ACC/GEN\_pl\_anim> *karano*<NTF>, *vladykam nehodnym od miscja svojoho odstupyty kazano*.

In *Palinodija* the distribution is as below: CP (14), PPP (2) and NTF (8 with a head noun, 2 without a head noun). There are 5 by-phrases (1 on NTF and 4 on PPP) of 4 types in this text: inst agent, prez-PP, od-PP, and z-PP, cf. *Kotoraja to kniha prez mudrych*<prez-PP> [...] *čytana*<PPP\_read>, *probuvana*<PPP\_try> *i popravlena*<PPP\_improve> *bula*<COP\_past\_ua>; *Chot' z Rymu*<z-PP> *i od biskupov*<od-PP> *mnohokrat buv*<COP\_past\_ua> *žadanyj*<PPP\_want>. None of the NTF construction has an a-declension noun in the NP; there is an ex of pl anim in the NP, cf. *Na ktorom*

*tych*<ACC/GEN\_pl\_anim>, *kotoriji by do symbolu viry «i od Syna» prykladaly, proklynano*<NTF\_damn>.

The majority of NTF constructions have a neuter noun or pronoun in the NP, and thus, can all be agreeing passives.

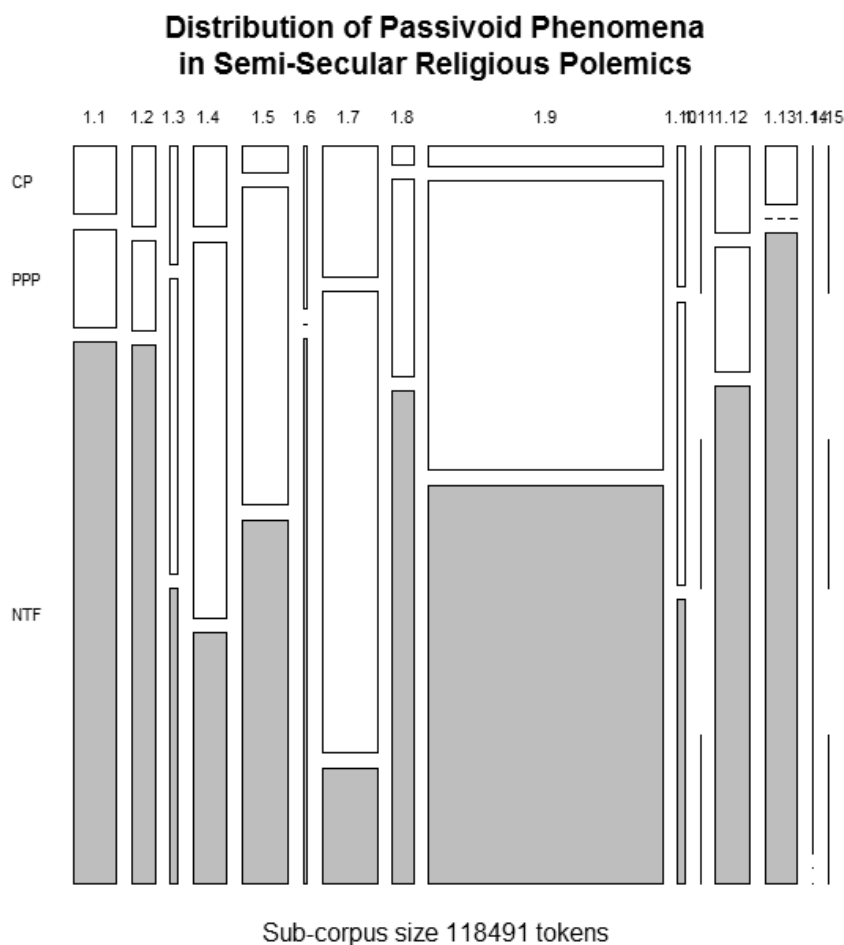
In *Nauka al'bo sposob zložennja kazannja* the NTF (10 with a head noun, 7 without a head noun) prevails over CP (9). The present ru copula occurs only in canonical passive (8). The past ru copula is attested in 2 NTF constructions, both of which have a neuter noun in the NP, syncretic between nominative and accusative, cf. *...tolkujučy Jevanhelije, kotoroje*<ACC/NOM\_n\_sg> *čytano*<NTF> *bylo*<COP\_past\_ru> *na službi božoj*. There are 3 NTF records with a neuter noun in the NP, whose status is ambiguous between personal and impersonal structures, cf. *Bo každoje kazannja*<ACC/NOM\_n\_sg> *moje vedluh temy napysano*<NTF\_read>. The same goes for the NTF with mask inan in the NP, cf. *ekskordium*<ACC/NOM\_m\_inan> *učyneno*<NTF\_make>. There are two records of NTF with maks anim in the NP, both however formed from the verb *zvat'/zvaty*, cf. *esli umerloho*<ACC\_m\_anim> *zvano*<NTF> *Dorofej*.

In *Ystorija o Lystrykijskom, to jest' o Razbojničeskom Ferarskom, abo Florenskom Sinode*

CP (15) is attested with past ru copula (14) and with present ru copula (1). CP occurs with ot-PP (4), e.g. *I tam ot ich*<ot-PP> *vdjačne prinjat byl*. PPP (7) is attested with ot-PP (2), e.g. *ot rusi*<ot-PP>, *to jest' ot kijan*<ot-PP>, *smert'ju pokonan*<PPP>. NTF (11) occurs with a neuter noun/pronoun in the NP (2), e.g. *Blahoslovenstvo u mene [...]* *zaplano*<NTF>; maks anim in the NP (1), e.g. *Patriarcha konstantynopolskoho Iosyfa podarkamy ot papy*<ot-PP> *blahano*<NTF>; pl inan in the NP (3), e.g. *těla*<ACC/NOM\_pl\_inan> *potajemne noč'ju chovano*<NTF>; quantifier/numeral phrase in the NP (3), e.g. *bolše*<Q> *sta duš pomučeno*<NTF>; *i nemalo*<Q> *ich pobito*<NTF>. NTF occurs with prez-PP (1), e.g. *že jemu nemal'*<Q> *polovina panstva prez saracynov*<prez-PP> *pobrano*<NTF>. There is 1 record for the genitive of negation on NTF, i.e. *i ne prinjato*<NTF>, *ani sluchano*<NTF> *jeho*<ACC/GEN\_m\_anim>.

Two remaining shorter texts, that belong into this category, have no records of NTF, and hardly any passivoid phenomena at all. In *Slovo l-e času vojny* there is one record of canonical passive with future ru copula, i.e. *v carstviji nebesnom počytani*<PPP\_pl\_worship> *budete*<COP\_fut\_ru>. The text *Slovo* has neither passive nor NTF records.

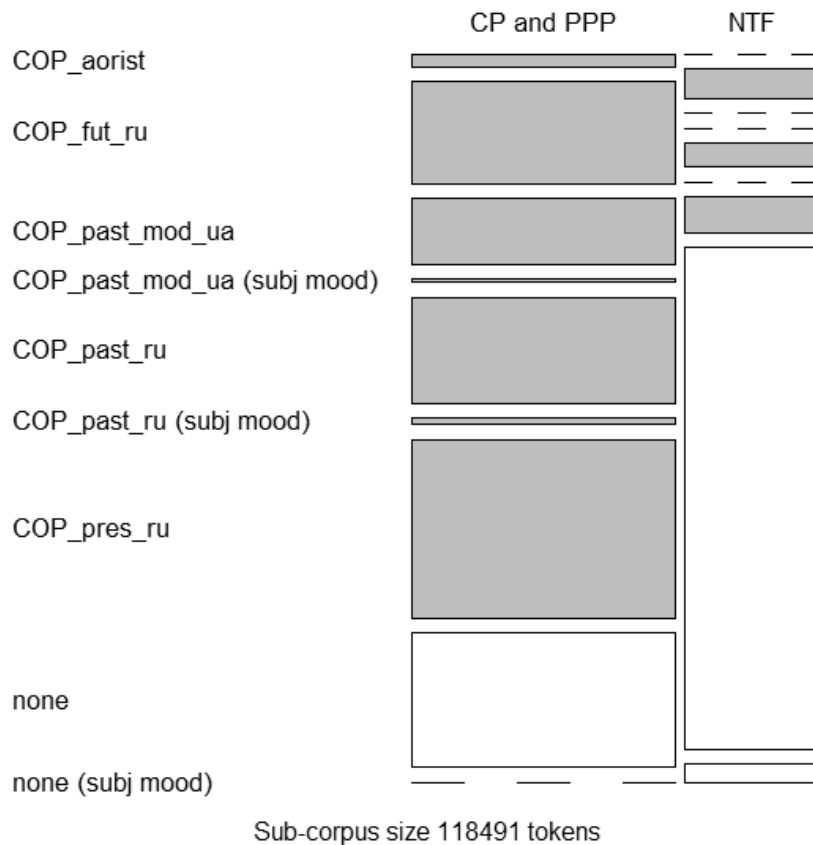
## Chart 6.1.4.a



- 1.1 *Ključ carstva nebesnogo* [The Key to the Kingdom of Heaven] (1587) by Herasym Smotryc'kyj, 10,236 tokens
- 1.2 *O jedinoj istinnoj prav. věřě* [On the Only Authentic Orthodox Faith] (1588) by Vasyl' Suraz'kyj, 5,653 tokens
- 1.3 *Kazan'je svjatocho Kyryla, patriarchy ijerusalymskoho, o antichristě i znakach jeho* [The Story Told by the Holy Kyrillos, the Patriarch of Jerusalem, about the Antichrist and his Signs] (1596) by Stefan Zyzanij, 1,892 tokens
- 1.4 *Apokrys* [The Answer (gr. αποκρίσις)] (1597/1598) by Chrystofor Filalet (pseudonym), 7,479 tokens
- 1.5 *Otpys na lyst v božě velebnoho otca Ypatija* [Answer to the l. of the Hon. F. I.] (1598) by K. Ostroz'kyj, 4,784 tokens
- 1.6 *Otpys na druhij lyst velebnoho otca Ypatija* [Answer to the s. l. of the Hon. F. I.] (1599) by K. Ostroz'kyj, 4,031 tokens
- 1.7 *Knyžka* [The Book] (1599-1600) by Ivan Vyšens'kyj, 31,393 tokens
- 1.8 *Ystorija o Lystrykijskom, to jest' o razbojničeskom Ferarskom, abo Florenskom sinode* [The story about the Lystrykijski, that is about the Predatory Ferarskij, or the Synod of Florence] (1598) by I. Vyšens'kyj, 6,769 tokens
- 1.9 *Perestoroha* [Warning] (1605) by unknown author, 19,503 tokens
- 1.10 *Poslannja do Domniki* [Epistle to Domnika] (1605) by Ivan Vyšens'kyj, 3,502 tokens
- 1.11 *Poslannja Iovu Knjahynyc'komu* [Epistle to Iov Knjahynyc'kyj] (1605) by Ivan Vyšens'kyj, 453 tokens
- 1.12 *Palinodija* [The Renunciation, gr. παλινῳδία] (1622) by Zacharija Kopystens'kyj, 6,689 tokens
- 1.13 *Nauka al'bo sposob zložennja kazannja* [Doctrine or Method of Narration] by I. Haljatovs'kyj (1659), 12,317 tokens
- 1.14 *Slovo 1-e času vojny* [The First Word in the Wartime] (ca. 1680) by Antonij Radyvylovs'kyj, 2,590 tokens
- 1.15 *Slovo* [The Word] (17<sup>th</sup> c.) by unknown author, 1,200 tokens.

# Chart 6.1.4.b

## Copula Types in Semi-Secular Religious Polemics



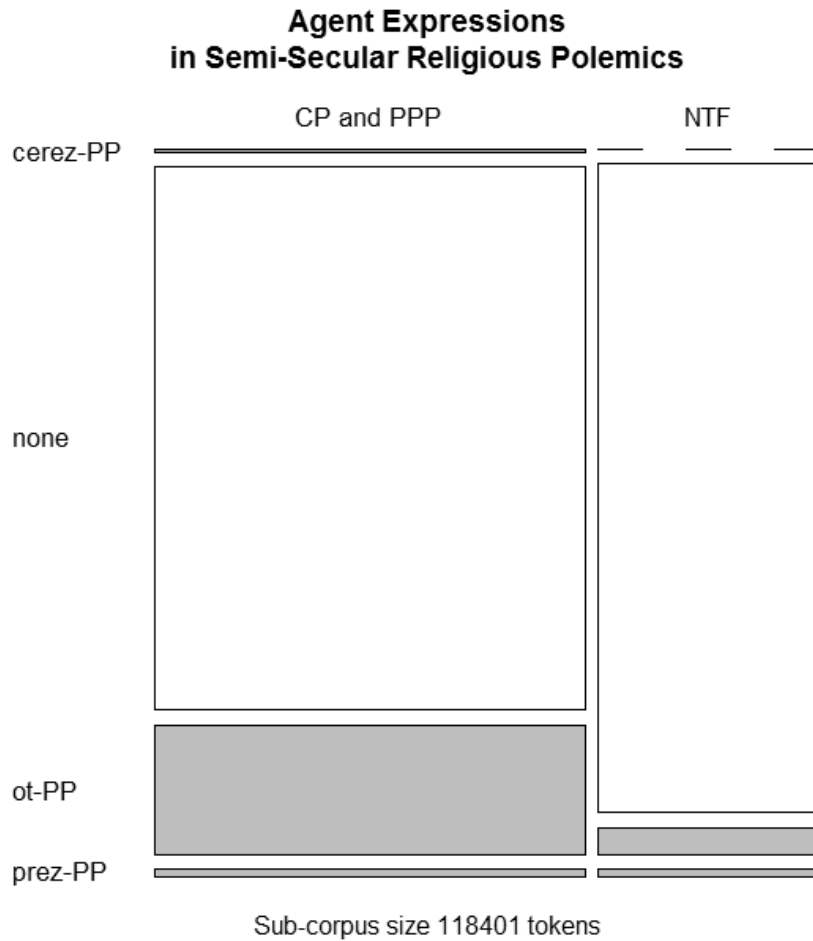
The data frame consists of 295 observations of 2 variables. The independent factor “copula” has 9 levels. The tables with numbers is below.

	COP_aorist	COP_fut_ru	COP_past_mod_ua	COP_past_mod_ua (subj mood)
CP and PPP	4	33	21	1
NTF	0	5	0	0

	COP_past_ru	COP_past_ru (subj mood)	COP_pres_ru	none	none (subj mood)
CP and PPP	34	2	57	43	0
NTF	4	0	6	82	3

X-squared = 109.5358, df = 8,  $p$ -value < 2.2e-16.

**Chart 5.3.4.c**



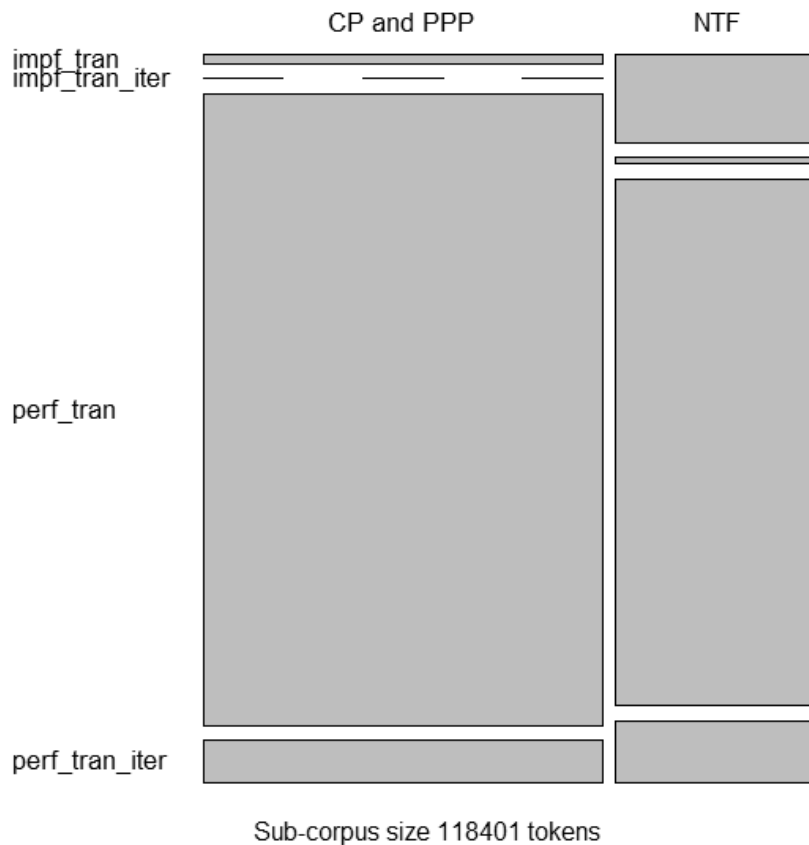
The data frame consists of 295 observations of 2 variables. The independent factor “agent” has 4 levels. The table with numbers is below.

	cerez-PP	none	ot-PP	prez-PP
CP and PPP	1	155	37	2
NTF	0	95	4	1

X-squared = 13.055, df = 3,  $p$ -value = 0.004519; Fisher's  $p$ -value = 0.0004191.

**Chart 6.1.4.d**

**Predicate Types in Semi-Secular Religious Polemics**



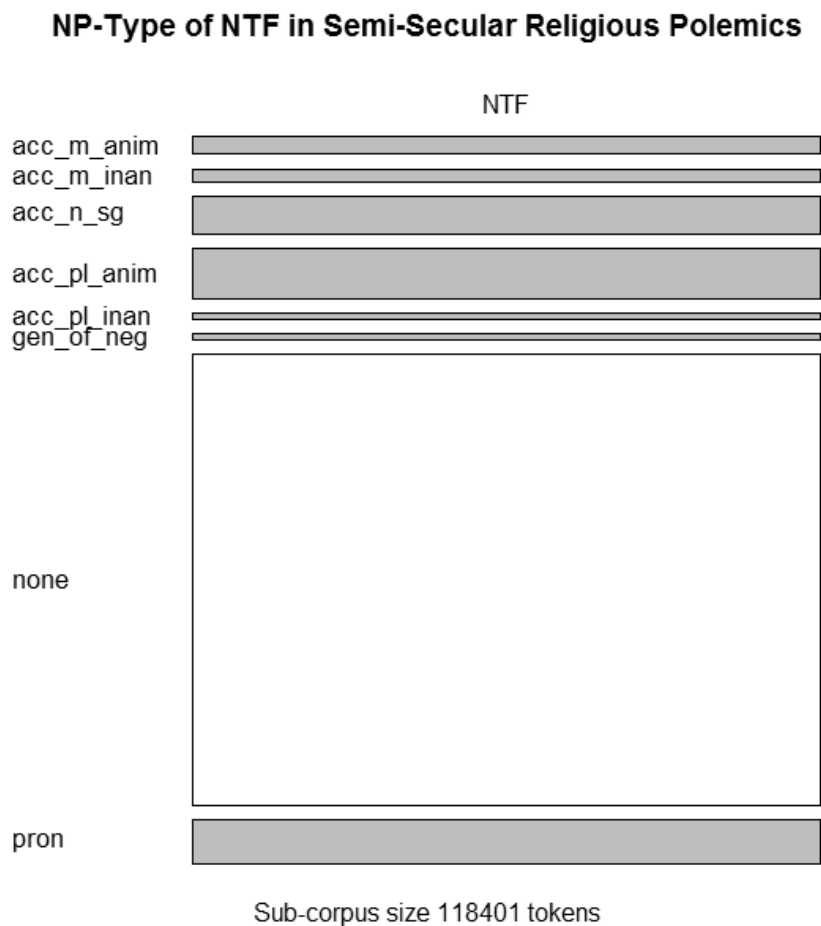
The data frame consists of 295 observations of 2 variables. The independent factor “predicate” has 4 levels. The table with numbers is below.

	impf_tran	impf_tran_iter	perf_tran	perf_tran_iter
CP and PPP	0	180	12	
NTF	13	1	77	9

X-squared = 20.4905, df = 3, *p*-value = 0.0001343; Fisher *p*-value = 6.346e-05.



Chart 6.1.4.e



The data frame consists of 100 observations and 2 variables. The independent factor “NP” has 8 levels. The table with numbers is below.

	acc_m_anim	acc_m_inan	acc_n_sg	
NTF3	2		6	
	acc_pl_anim	acc_pl_inan	gen_of_neg	nonepron
NTF8	1	1	72	7

X-squared = 327.84, df = 7, p-value < 2.2e-16a.

### Regression Analysis 6.1.4.f Semi-Secular Religious Polemics Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Subjunctive\_mood + Copula:Agent + Copula:Predicate\_type +  
Subjunctive\_mood:Predicate\_type + Agent:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood Ratio Test		Discrimination Indexes		Rank Discrim. Indexes	
Obs	295	LR chi2	119.64	R2	0.46	C	0,86
NTF	100	d.f.	9	g	3.320	Dxy	0.718
PPP and CP	195	Pr(> chi2)	<0.0001	gr	27.657	gamma	0.817
max	deriv  0.001			gp	0.308	tau-a	0.323
				Brier	0.140		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	-0.2130	0.1941	-1.10	0.2726
Copula	1.0928	0.2008	5.44	<0.0001
Subjunctive_mood	-8.4363	43.6203	-0.19	0.8466
Agent	0.2344	0.3345	0.70	0.4835
Predicate_type	-1.4573	0.5679	-2.57	0.0103
Copula * Subjunctive_mood	6.9472	29.9660	0.23	0.8167
Copula * Agent	1.6585	1.0786	1.54	0.1241
Copula * Predicate_type	0.6370	0.4728	1.35	0.1778
Subjunctive_mood * Predicate_type	1.1435	57.4607	0.02	0.9841
Agent * Predicate_type	-1.5725	1.4468	-1.09	0.2771

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 107.89, df = 5,  $p$ -value < 2.2e-16.

Subjunctive\_mood: X-squared = 0.16495, df = 1,  $p$ -value = 0.6846; Fisher's  $p$ -value = 0.411.

Agent: X-squared = 14.777, df = 4,  $p$ -value = 0.005186; Fisher's  $p$ -value = 0.0003607.

Predicate\_type: X-squared = 20.49, df = 3,  $p$ -value = 0.0001343; Fisher's  $p$ -value = 6.346e-05.

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test indicates that the logistic regression model fits the data well. The Indexes C and Dxy demonstrate that within the model the dependent variable NTF\_or\_PPP can be predicted well via independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood", and that the model fits the data moderately well.  $R^2$  is not very high, but high enough to predict the model's variability moderately well. The  $p$ -values for each of the 2 core Factors, namely „Copula“ and „Predicate\_type“, provide strong evidence against the null hypothesis, while the  $p$ -values for „Subjunctive\_mood“ and „Agent“ are too high to be considered significant. The small  $p$ -value for the factor „Agent“ in the Chi-Square and Fisher's tests indicates however that the observed differences did not occur randomly. The interactions between factors are not significant enough in this model, since their  $p$ -values are too high.

### 6.1.5. Local and monastery chronicles of 1600s–1700s [9 texts; 100,430 tokens]<sup>113</sup>

The monastery and local chronicles provide valuable material on local history, social life and morals, only marginally treating broader historical events. Instead of presenting information under yearly entries, some of these chronicles use a narrative style modeled on the works of Strykowski and Bielski. The authorship of these works is either unknown or controversial. The monastery chronicles tend to be ascribed to the monastery principals or leaders.

The distribution of passivoid phenomena in 17<sup>th</sup> c. *Černihivs'kyj litopys* is as follows: NTF (35 with a head noun; 3 with a null head noun; 2 without a head noun) prevails over PP(21) and CP (12). CP (12) occurs with present ru copula (3), past ru copula (4), past pol copula (5), and ot"-PP (4), e.g. *poběždeny švedy ot" vojska moskovskho*<ot-PP> *zostali*<COP\_pol\_past>; *byl" obležen" ot" švedov"*<ot-PP>. PPP (21) as aorist also occurs with ot"-PP (2), cf. *ot" Ioakima*<ot-PP>, [...] *posvyjaščen na Moskvě*; with črez"-PP (1), e.g. *Koronovana* [...] *imperatrice* [...], *črez" samoho eho imperatorskoho veličestva*<črez"-PP>; as well as with inst agent (1), e.g. *pohreben" toho ž" mėsajaca dnja 28, mitropolitom" serbskim" Nektariem"*<INST>. NTF (38) is attested with mask anim in the NP (16), e.g. *pana*<ACC/GEN\_m\_anim> *zabito*<NTF>; with pl anim in the NP (9), e.g. *pochovano*<NTF> *ich"*<ACC/GEN\_pl\_anim> *v" monastyru*; pl inan (2), e.g. *i vsě požitky*<ACC/NOM\_pl\_inan> [...], *odobrano*<NTF>; numeral phrase as a head noun (4), e.g. *i raneno*<NTF> *čelověka 55*<NUM>; with a neuter noun in the NP (1), e.g. *nakazanie*<ACC/NOM\_n\_sg> *čyneno*<NTF>. NTF has been attested with nouns of *a*-declension in the NP (2), e.g. *staršynu polkovuju*<ACC\_a-decl> *i deržano*<NTF> *pod" karaulom"*.

In the 17<sup>th</sup> c. *Chmil'nyc'kyj litopys* there is 1 PPP, i.e. *i pochovan" mėsajaca dekabrja 12*. NTF (1) occurs with pl anim in the NP, i.e. *Tohdy dvoch"*<ACC/GEN\_pl\_anim> *kozakov" provažono*<NTF> *čerez" Chmelnyk"*.

The distribution of passivoid phenomena in 17<sup>th</sup> c. *Hustyns'kyj monastyr's'kyj litopys* is as follows: CP(24), PPP (12) and NTF (12 with a head noun; 4 without a head noun; 1 used as attribute). PPP (12) as aorist occurs with ot-PP (1), e.g. *zoslanny*<PPP> *ot mene*<ot-PP> *panove*; with inst agent (1), e.g. *Monastyr' sej postroen"*<PPP> *v" 1600 hodu Ieromonachom" Ylieju Torskim"*<INST>. CP is used with imperfect copula (6), aorist copula (5), present ru copula (3), future ru copula (1), past ru copula (9). CP occurs with ot-PP (5), e.g. *usilovan" bě ot starec" i*

<sup>113</sup>We group the both text types together: *Černihivs'kyj litopys* [Černihiv Chronicle], 10,286 tokens; *Chmil'nyc'kyj litopys* [Chmil'nyk Chronicle], 1,431 tokens; *Hustyns'kyj monastyr's'kyj litopys* [Chronicle of the Hustyn' Monastery], 37,838 tokens; *Kyjivs'kyj litopys* [Kyjiv Chronicle], 9,933 tokens; *L'vivs'kyj litopys* [L'viv Chronicle], 8,766 tokens; *Mežyhirs'kyj litopys* [Mežyhirja Chronicle], 1,456 tokens; *Ostroz'kyj litopysec'* [Ostroh Chronicle], 5,730 tokens; *Otryvki izъ lětopisi Mgarskago monastyrja* (1682-1775) [The Excerpts from the Chronicle of the Mgar Monastery (1682-1775)], 13,563 tokens.

*bratjiy mežyhorskych"* <ot-PP>. NTF is attested with unambiguously accusative case in the NP (2), e.g. *mazepu* <ACC\_a-decl> *nastavleno* <NTF> *hetmanom*; *hde i mohylu* <ACC\_a-decl> *značnuju vysypano* <NTF>; with mask anim in the NP (2), e.g. *Michailovskoho Ihumena* <ACC/GEN\_m\_anim> *Mytropolytom učyneno* <NTF> *Kievskim*; with pl inan in the NP (1), e.g. *i mošči* <ACC/NOM\_pl\_inan> *roznych" svjatyh" [...] vloženo* <NTF>; with mask inan (1), e.g. *koloděz'* <ACC/NOM\_m\_inan> *zmurovano* <NTF>; with fem non-*a*-stem (1), e.g. *cerkov"* <ACC/NOM\_non-a-decl> *zmurovano* <NTF>; as well as with neuter noun/pronoun in the NP (2), e.g. *i koleso* <ACC/NOM\_n\_sg> *z dvoma vědrami velykymy urobлено* <NTF>. There is 1 record of NTF used as an attribute, cf. *vidæ měst"ce mnstræ zyždenno"* <NTF\_attr> *vomalě něčto i krasno*.

In 17<sup>th</sup> c. *Kyjivs'kyj litopys* the passivoid phenomena is distributed as below: CP (21), PPP (18) and NTF (17). CP (21) is attested with aorist copula (8), past ru copula (11), present ru (1), and future ru copula (1). Additionally, CP co-occurs with prez-PP (1), e.g. *i poražena est Moskva prez poljakov", kozakov" i doncov* <prez-PP>; with ot-PP (2), e.g. *Bojazokii cēsar turjeckii, ot Jamjerljana* <ot-PP>, *carja tatarskoho, byl poimanyi i v klětcje zamknjenyi*; with inst of agent (2), e.g. *vzjat byst Smoljensk" knjazjem moskovskim* <INST>. PPP as aorist (18) is attested with ot-PP (3), e.g. *krol ot Voloch* <ot-PP> *pobit*. NTF occurs with *a*-stem noun in the NP (3), cf. *ufaleno voinu* <ACC\_a-decl> *naprotiv zsultana*; *stolici Moskvu* <ACC\_a-decl> *posylkovano*; with a neuter noun/pronoun in the NP (5), e.g. *vsje* <ACC/NOM\_pron> *pobrano* <NTF> *srjebro i zlato*; mask anim in the NP (4), e.g. *Žykhymonta Švjeckoho* <ACC/GEN\_m\_anim> *na kroljevstvo Polksoje obrano* <NTF>; numeral phrase/unit of measurement in the NP (1), e.g. *i po sjemi kop"* <unit\_meas> *žyta moločjeno* <NTF>; *a skopano jei polšjesta sažnja* <unit\_meas> *dobrych uvyšky*; with mask inan (1), e.g. *seim"* <ACC/NOM\_m\_inan> *u Varšave zložono* <NTF>. NTF occurs with ot-PP (1), e.g. *i popaljeno* <NTF> *vsje ot pohanoho carja pjerjekopskoho* <ot-PP>; and with past ru copula (1), e.g. *kotoroje zobrano* <NTF> *bylo* <COP\_past\_ru>.

The distribution of passivoid phenomena in 17<sup>th</sup> c. *L'vivs'kyj litopys* is as follows: NTF (43 with a head noun; 4 without a head noun) by far outnumbers CP (4) and PPP (3). NTF occurs with fem *a*-declension noun in the NP (4), e.g. *Sulymu* <ACC\_a-decl> *zahubleno* <NTF>; *nahorodu* <ACC\_a-decl> *dano* <NTF>; *Domšu* <ACC\_a-decl>, *hospodarja volos'koho, stjato* <NTF>; mask anim in the NP (12), e.g. *Nalyvajka* <ACC/GEN\_m\_anim> *zhubleno* <NTF>; with pl anim in the NP (9), e.g. *Žydov* <ACC/GEN\_pl\_anim> *na predmistju bureno* <NTF>; with pl inan (2), e.g. *kotoromu dano* <NTF> *skarby* <ACC/NOM\_pl\_inan> *ne maliji*; with mask inan (2), e.g. *Kljaštor* <ACC/NOM\_m\_inan> *založeno* <NTF>; with a neuter noun/pronoun/non-*a*-declension fem noun in the NP (4), e.g. *U volosich pobyto* <NTF> *pol's'koje vojs'ko* <ACC/NOM\_n\_sg> *s Potoc'kym*; with a numeral phrase (6), e.g. *žolniov 30* <NUM> *do Kyjeva pryprovaženo* <NTF>. One of the records with a fem *a*-declension noun co-

occurs with a past ru copula, cf. *novynu*<ACC\_a-decl> *bulo pryneseno*<NTF> *ot Zachodu*. There are instances of PPP as aorist (3) and CP with pres ru (1) and past semi-mod ua copulas (4), cf. *A kapitan, kotryj bul*<COP\_semi-mod\_ua> *pojmanyj, na ve[ly]koj pomoči bul kozakom v strel'bi; V tom že roku po svjatom Marcyni sejm bul*<COP\_semi-mod\_ua> *zloženyj*. Besides, there is an instance of a by-phrase in nominative that functions as an inst agent (1), e.g. *Myhalja byto*<NTF> *ljachove*<INST>.

The passivoid phenomena in early 18<sup>th</sup> c. *Mežyhirs'kyj litopys* is distributed as follows: CP (2), PP (2) and NTF (5). CP (2) occurs with both inst agent (1), e.g. *byl'' pohreben'' Innokentiem'' Khizelem''*<INST>; and ot-PP (1) in the structure, e.g. *rozstreljan'' byl'' ot'' zaporožcov''*<ot-PP> *hetman'' Sava Moskal' i Onoškovič'' pysar''*. There are 3 records of PPP as aorist. NTF is attested with an *a*-declension noun in the NP (1), e.g. *kotruju*<ACC\_a-decl> *prozvano*<NTF> *Čuhuev''*; with neuter noun/non-*a*-declension fem noun in the NP (3), e.g. *i provažono*<NTF> *tělo*<ACC/NOM\_n\_sg> *eho*; as well as with mask anim in the NP (1), e.g. *komisara*<ACC/GEN\_m\_anim> *vzjato*<NTF> *v'' Ordu*.

The passivoid phenomena in the 17<sup>th</sup> c. *Ostroz'kyj litopysec'* is distributed as follows: NTF (17 with a head noun; 7 without a head noun; 1 with a null head noun; 1 in attributive function), CP (3), PPP (18). NTF occurs with *a*-stem noun in the NP (3), e.g. *i spaleno*<NTF> *jiji*<ACC/GEN\_a-decl>; *a pravoslavniyi vladyku*<ACC\_a-decl> *ubyto*<NTF>; mask anim in the NP (4), e.g. *i vsaženo*<NTF> *jeho*<ACC/GEN\_m\_anim> *na vežu vysoko na mori*; with pl anim in the NP (3), e.g. *a inych*<ACC/GEN\_pl\_anim> *na pol pozbyvano*<NTF>; with pl inan in the NP (1); with neuter noun in the NP (1); with mask inan in the NP (1), e.g. *Ostropol'*<ACC/NOM\_m\_inan> *založeno*<NTF>; with numeral phrase (1). There are 2 records of old nominative in place of structural accusative, that is records of nominative as objectcase, e.g. *Tatare*<NOM/ACC\_pl\_anim> *pod Biloju Cerkvoju poraženo*<NTF>; *a iniji*<NOM/ACC\_pl\_anim> – *zamordovano*<NTF>. Further, NTF occurs with ot-PP (1), e.g. *ot Jana Zamojs'koho*<ot-PP> *vojs'ko jeho poraženo*<NTF>. Besides, ot-PP co-occurs with genitive of negation in NTF (1), e.g. *pys'mo sja pokazalo na kostelach i na školach žydovs'kych i na domach, ni ot koho*<ot-PP> *ne*<NEG> *pročytano*<NTF>. CP (3) occurs with pres pol copula (1), e.g. *Jestes'*<COP\_pres\_pol> *očarovana*; and with past semi-mod ua copula (2), e.g. *i ot ceserja turec'koho lyst do neho bul*<COP\_past\_semi-mod\_ua> *danyj*. PPP as aorist (18) is attested with ot-PP (2), e.g. *I poraženi poljacy ot kozakov*<ot-PP>; and with prez-PP (1), e.g. *knjaz' Korec'kyj u Vološech prez Radula i turkov*<prez-PP> *škodlyve poražon*.

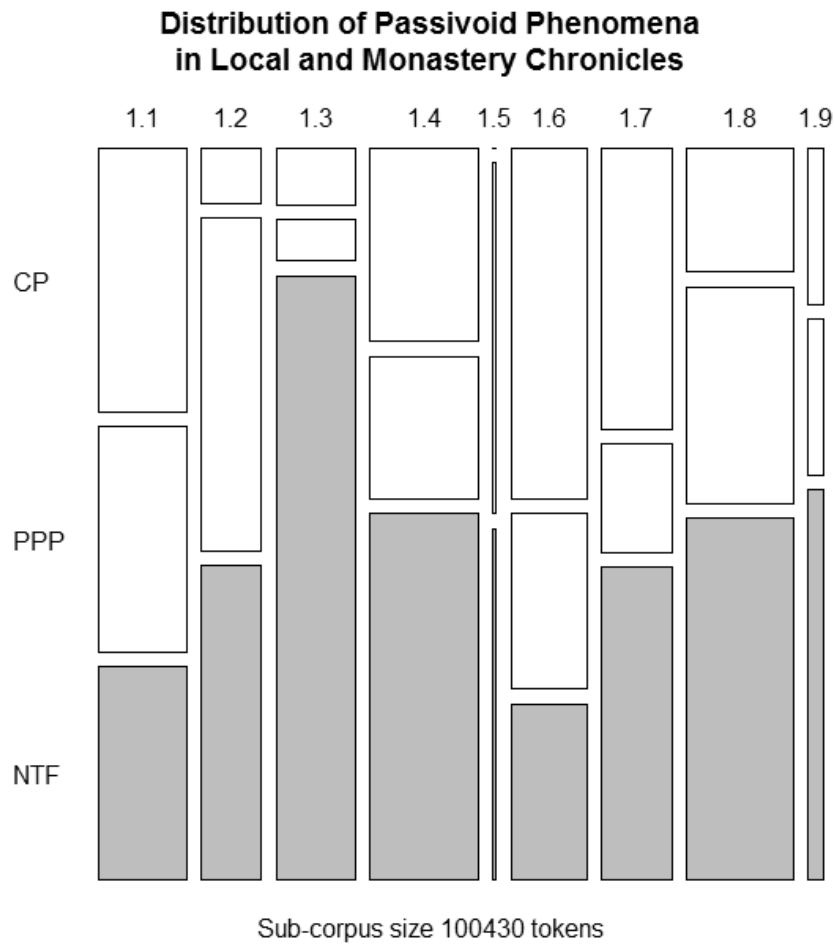
The distribution of passivoid phenomena in 18<sup>th</sup> c. *Otryvki izъ lětopisi Mgarskago monastyrja* is the following: CP (18), PPP (7) and NTF (20 with a head noun; 3 without a head noun). CP (18) occurs with aorist copula (4), past ru copula (8), pres ru copula (4), future

ru copula (1), and past pol copula (1). CP is attested with ot"-PP (2), e.g. *vdjačne byl'' prinjatyj ot'' dobroděja pana hetmana*<ot-PP>; *a běloe želězo šesti fas'' danoe bylo ot'' pana Mychajla Vujachievycha*<ot-PP>. There are 2 exx for long form endings on agreeing passives with a neuter noun in the subject position, e.g. *ašče vapno*<ACC/NOM\_n\_sg> *i privezenoe*<PPP\_long> *do obyteli bylo*<COP\_past\_ru>. PPP (7) occurs with both ot"-PP (1), e.g. *Lyst'' ot'' jasnevelmožnogo eho milosti pana*<ot-PP> *hetmana pisannyj*<PPP\_long>; as well as with inst of agent (1), e.g. *postavlenn'' pervyj archimandritom'' v'' sej Mharskij monastyr''*, [...], *preosvjaščennym'' Rafailom'' Zaborovskim''*<INST>. NTF is attested with neuter noun/pronoun/non-*a*-stem fem noun in the NP (7), e.g. *i toe želězo*<ACC/NOM\_n\_sg> *z'' Baturyna julja mėsjača pryvezeno*<NTF>; *puščeno*<NTF> *mně krov''*<ACC/NOM\_fem\_non-a-decl>; with pl inan in the NP (5), e.g. *a tye kresty*<ACC/NOM\_pl\_inan> *po ukazu jasnevelmožnogo dobroděja pana hetmana u Hluhově robleno*<NTF>; with mask anim in the NP (2), e.g. *pryslano*<NTF> *z'' Baturyna Yvana bljachněra*<ACC/GEN\_m\_anim>; with numeral phrase in the NP (4), e.g. *pryprovaženo*<NTF> *bajdakov'' dva*<NUM> *vapna*. NTF co-occurs with inst by-phrase (1), e.g. *čto monašeskoe ne pohorělo, to*<ACC/NOM\_pron> *postoronnimi ljudmi v'' lěsě zabrato*<NTF>. NTF is attested with past ru copula (3) and with aorist copula (1), but exclusively in the environment syncretic between personal and impersonal, e.g. *aby [...] toe dělo*<ACC/NOM\_n\_sg> *vystavleno*<NTF> *bylo*<COP\_past\_ru> *i okazano*<NTF>; *malo*<Q> *čto*<ACC/NOM\_pron> *dělano*<NTF> *byst'*<COP\_aor> *za skudostiju vapna*.

Passivoid phenomena in the 17<sup>th</sup> c. *Litopys Jana Binvilskoho* is distributed as follows: PPP (19), CP (14) and NTF (36 with a head noun; 1 with a null argument; 5 without a head noun). PPP as aorist (19) co-occurs with prez-PP (1), e.g. *prez*<prez-PP> *Pavla Dimitroviča z druku na svet podana*<PPP>; with ot-PP (1), e.g. *ot markhrabov brandeburskich*<ot-PP> *zradlive zabityj*<PPP\_long> *Kromer*. CP (14) is attested with present ru copula (5), past ru copula (8), aorist copula (1). CP (14) is attested with ot-PP (3), cf. *Byl namoven Volodymer ot tatar*<ot-PP>, *aby viru ych prynjal*; *Začym ot mytropolyta i vladykov*<ot-PP> *byly vdjačne prinjaty*; *ot turka*<ot-PP> *pod Varnoj zabytyj est*. NTF is attested with a neuter noun/pronoun in the NP (8), e.g. *Hdy čytano*<NTF> *evan''helie*<ACC/NOM\_n\_sg>; with mask inan in the NP (4), e.g. *i polon*<ACC/NOM\_m\_inan> *uves nazad verneno*<NTF>; with mask anim in the NP (10), e.g. *knjazja Vyšneveckoho*<ACC/GEN\_m\_anim> *otruto*<NTF>; with pl anim in the NP (1), e.g. *kotorych*<ACC/GEN\_pl\_anim> *zvano*<NTF>; with pl inan in the NP (2), e.g. *žeby v kostelach šljuby*<ACC/NOM\_pl\_inan> *davano*<NTF>, *a ne v domech*; with numeral phrase/quantifier in the NP (6), e.g. *hde mnoho*<Q> *srebra, zolota, perel, šat dorohych do Polski pobrano*<NTF>; *za netom 3*<NUM> *ryb''ky vytjahneno*<NTF>. There are 2 records of unambiguously accusative object on NTF, e.g. *voevodu putivlskoho Sapehu*<ACC\_a-decl> *tam že u vezen'e vzjato*<NTF>; *Toho ž roku ruskiju zem''lju*<ACC\_a-decl> *ku Polščy*

*prylučeno*<NTF>. The NTF with copula (1) can also be an instance of agreeing passive, cf. *Ljud poljakal"sjā byl o zbože, kotoroe*<ACC/NOM\_n\_sg> *bylo*<COP\_past\_ru> *uže vysypano*<NTF>. The old accusative syncretic with nominative (instead of syncretic with genitive) is attested as a head noun of NTF (1), cf. *za krolja Stefana hdaŋ"ščane*<ACC/NOM\_pl\_anim> *hordye poražono*<NTF>.

## Chart 6.1.5.a

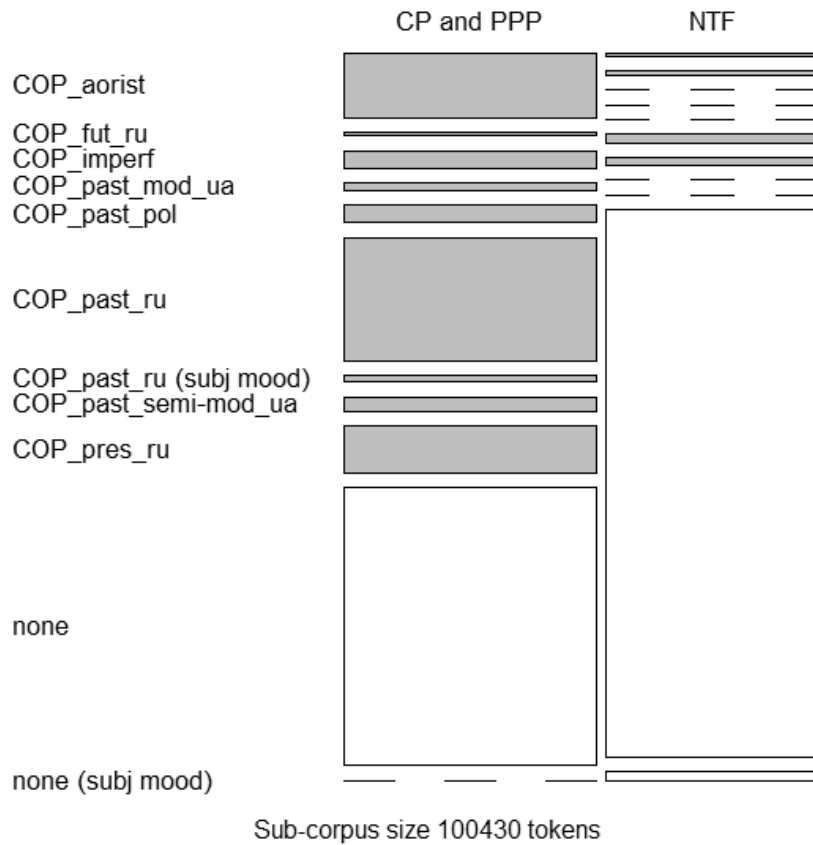


- 1.1 *Kyjivs'kyj litopys* [Kyjiv Chronicle] (early 17<sup>th</sup> c.), 9,933 tokens
- 1.2 *Ostroz'kyj litopysec'* [Ostroh Chronicler] (early 17<sup>th</sup> c.), 5,730 tokens
- 1.3 *L'vivs'kyj litopys* [L'viv Chronicle] (30s-40s of the 17<sup>th</sup> c.), 8,766 tokens
- 1.4 *Litopys Jana Binvil's'koho* [The Chronicle of Jan Binvil's'kyj] (1<sup>st</sup> half of the 17<sup>th</sup> c.), 11,427 tokens
- 1.5 *Chmil'nyc'kyj litopys* [Chmil'nyk Chronicle] (1<sup>st</sup> half of 17<sup>th</sup> c.), 1,431 tokens
- 1.6 *Hustyns'kyj monastyr's'kyj litopys* [Chronicle of the Hustyn' Monastery], (ca. 1670), 37,838 tokens
- 1.7 *Otryvki izъ lѣtopisi Mgarskago monastyrja* (1682-1775) [The Excerpts from the Chronicle of the Mgar Monastery ], 13,563 tokens
- 1.8 *Černihivs'kyj litopys* [Černihiv Chronicle] (early 18<sup>th</sup> c.) 10,286 tokens
- 1.9 *Mežyhirs'kyj litopys* [Mežyhirja Chronicle] (early 18<sup>th</sup> c) 1,456 tokens



# Chart 6.1.5.b

## Copula Types in Local and Monastery Chronicles



The data frame consists of 297 observations and 2 variables. The second variable has 11 levels. The table below summarizes the absolute values of obtained data:

	COP_aor	COP_fut_ru	COP_imp	COP_past_mod_ua	COP_past_pol	COP_past_ru
CP and PPP	18	1	5	2	5	34
NTF	1	1	0	0	0	2

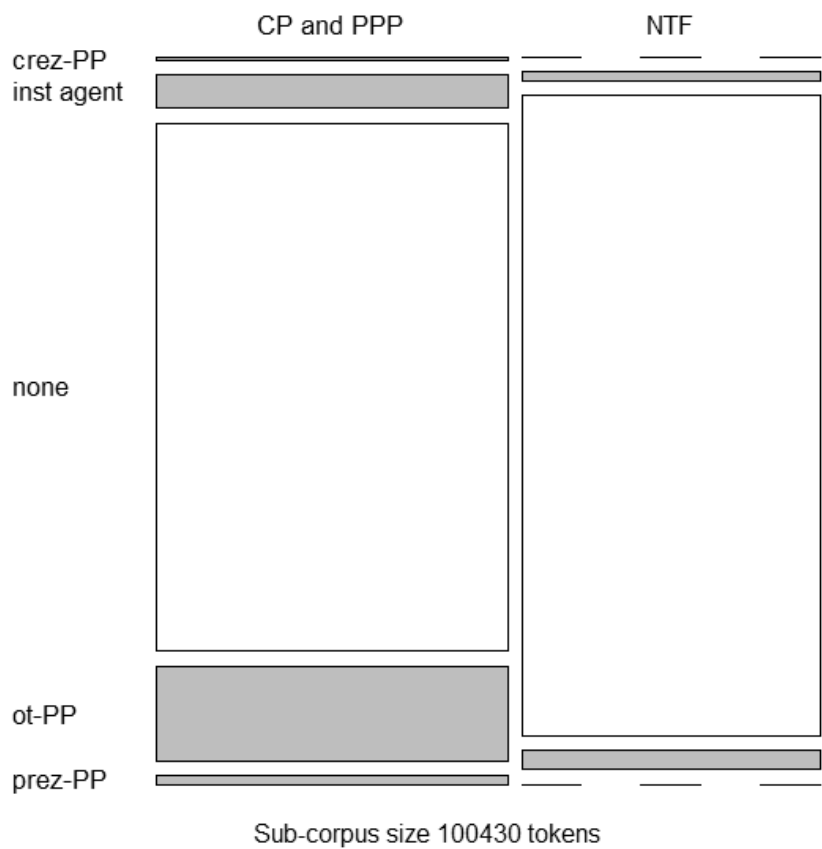
  

	COP_past_ru(subj)	COP_past_semi-mod_ua	COP_pres_ru	none	None (subj)
CP and PPP	2	4	13	77	0
NTF	2	0	0	128	2

X-squared = 85.8467, df = 10, *p*-value = 3.553e-14

Chart 6.1.5.c

Agent Expressions in Local and Monastery Chronicles

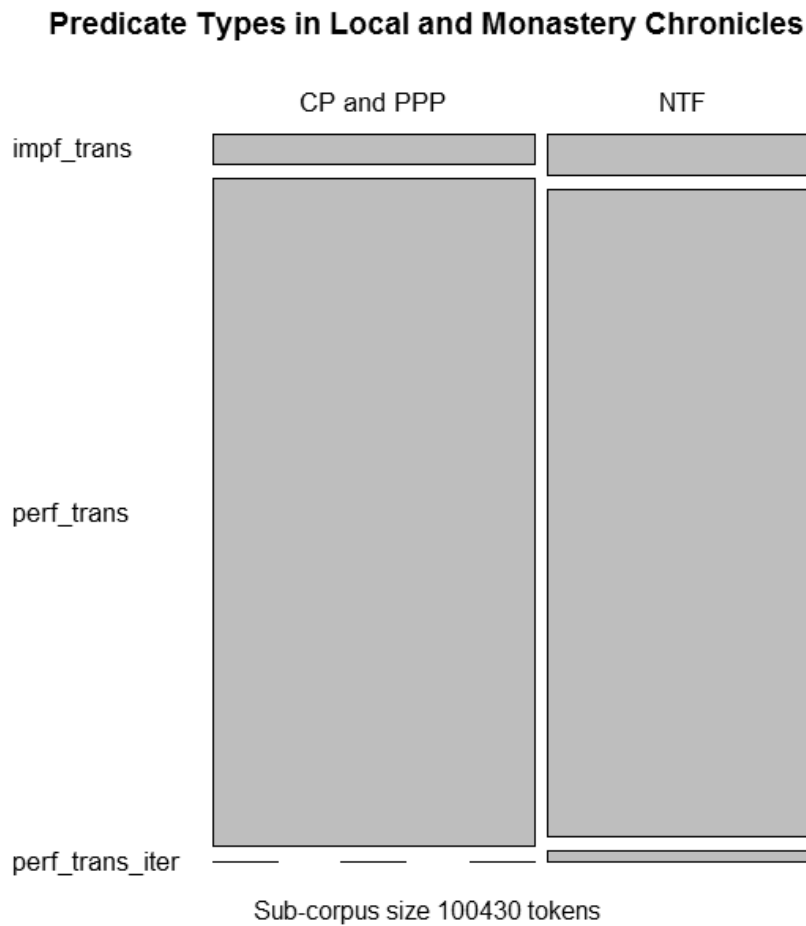


The data frame consists of 297 observations of 2 variables. The independent factor “agent” has 5 levels. The table with numbers is below.

	crez-PP inst agent	none	ot-PP	prez-PP
CP and PPP	18	127	23	2
NTF	0	130	4	0

X-squared = 18.0288, df = 4, *p*-value = 0.001218; Fisher's *p*-value = 0.000195.

## Chart 6.1.5.d

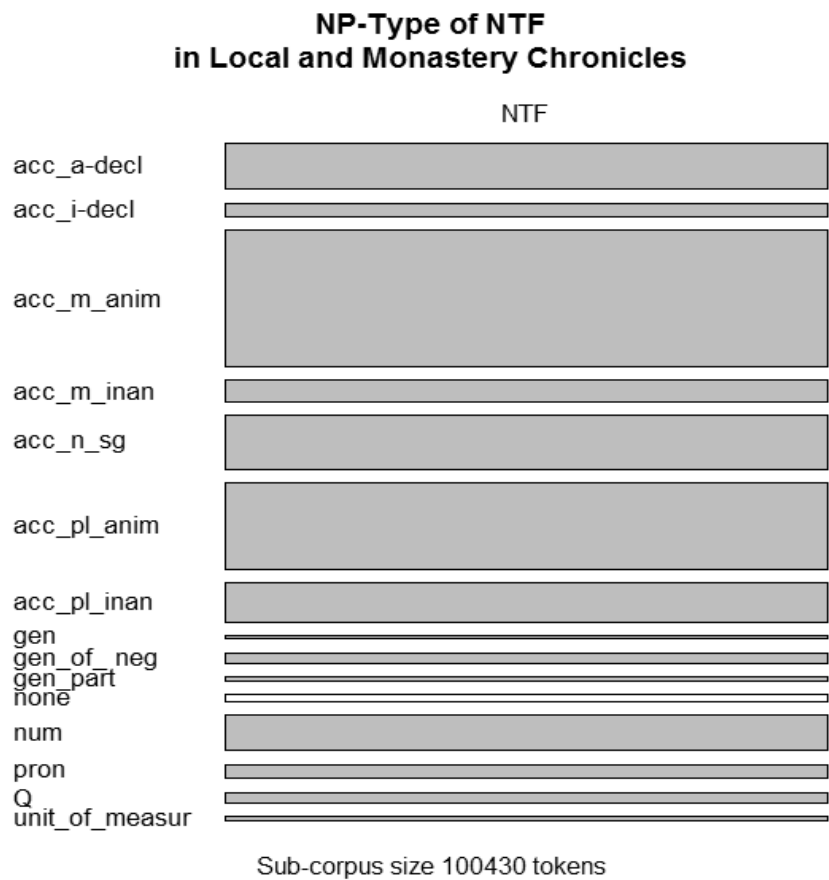


The data frame consists of 297 observations of 2 variables. The independent factor “predicate” has 3 levels. The table with numbers is below.

	impf_tran	perf_tran	perf_tran_iter
CP and PPP	7	154	0
NTF	8	126	2

X-squared = 2.782, df = 2,  $p$ -value = 0.2488; Fisher's  $p$ -value = 0.3039.

Chart 6.1.5.e



The data frame consists of 136 observations of 2 variables. The independent factor “NP” has 15 levels, cf. the table below:

	acc_a-decl	acc_i-decl	acc_m_anim	acc_m_inan	acc_n_sg
NTF13	4	38	6	15	
	acc_pl_anim	acc_pl_inan	gen	gen_of_neg	gen_part
NTF24	11	1	3	1	
	nonen	num	pron	Q	unit_of_measur
NTF2	10	4	3	1	

X-squared = 164.88, df = 14, *p*-value < 2.2e-16.

### Regression Analysis 6.1.5.f Local and Monastery Chronicles Logistic Regression Model

```
lrm(formula = NTF_or_PPP ~ Copula + Subjunctive_mood + Agent + Predicate_type
+
Copula:Subjunctive_mood + Copula:Agent + Copula:Predicate_type +
Subjunctive_mood:Predicate_type + Agent:Predicate_type)
```

The significance level is set to 0,05, that is  $p$ -value  $< 0,05$  is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood Ratio Test		Discrimination Indexes		Rank Discrim. Indexes	
Obs	297	LR chi2	102.81	R2	0,39	C	0,79
NTF	136	d.f.	9	g	3,51	Dxy	0,58
PPP and CP161		Pr(> chi2)	<0.0001	gr	33,57	gamma	0,85
max	deriv  0.005			gp	0,27	tau-a	0,29
				Brier	0,17		
		Coef	S.E.	Wald Z	Pr(> Z )		
Intercept		-0.4923	0.1535	-3.21	0.0013		
Copula		1.0107	0.2139	4.73	<0.0001		
Subjunctive_mood		-9.7228	116.8600	-0.08	0.9337		
Agent		1.1706	0.4367	2.68	0.0073		
Predicate_type		-1.5757	1.0115	-1.56	0.1193		
Copula * Subjunctive_mood		3.7503	58.4336	0.06	0.9488		
Copula * Agent		2.5973	10.4595	0.25	0.8039		
Copula * Predicate_type		5.1301	41.2930	0.12	0.9011		
Subjunctive_mood * Predicate_type		2.2222	184.6563	0.01	0.9904		
Agent * Predicate_type		-0.1367	0.9695	-0.14	0.8879		

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 81.856, df = 8,  $p$ -value = 2.067e-14;  
Subjunctive\_mood: X-squared = 0.38806, df = 1,  $p$ -value = 0.5333; Fisher's  $p$ -value = 0.4178.  
Agent: X-squared = 18.029, df = 4,  $p$ -value = 0.001218; Fisher's  $p$ -value = 0.000195.  
Predicate\_type: X-squared = 2.782, df = 2,  $p$ -value = 0.2488; Fisher's  $p$ -value = 0.3039.

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test indicates that the logistic regression model fits the data well. The coefficients C, Dxy and  $R^2$  are high enough to conclude that the dependent variable NTF\_or\_PPP can be predicted reasonably well within the model via independent variables “Copula”, “Agent”, “Predicate\_type” and “Subjunctive\_mood”, and that the model fit is acceptable. The  $p$ -values for the Factors “Copula” and “Agent” are small enough to reject the null hypothesis, while the  $p$ -value of the Factor “Subjunctive\_mood” and “Predicate\_type” are not. The interactions between various Factors within the model are not significant, since their  $p$ -values are close to 1. The  $p$ -values of independent variables in the tests slightly differ from those inside the model.

### 6.1.6. The entertaining fiction of 1500s and 1600s [13 texts; 53,902 tokens]<sup>114</sup>

Although Ukraine entered the 16<sup>th</sup> c. closely tied to the Byzantine literary tradition, there were entertaining stories circulating in its South-Western territories already in the 16<sup>th</sup> c. Even so, the impact of the Renaissance on Ukrainian culture was, according to Čyževs'kyj (1997), rather insignificant: it was restricted to the borrowing of certain literary genres and themes (238f). The language of the chosen stories is close to vernacular. The 17<sup>th</sup> c. sub-corpus includes short stories about foreign lands, people and their way of life; their motifs are either taken from the contemporary Western European culture or go back to the antique, i.e. Greek and Roman tradition.

The distribution of passivoid phenomena in 16<sup>th</sup> c. *Istorija o Attili, koroli uhors'kom* is as follows: CP (33), PPP (5) and NTF (38 with a head noun; 1 without a head noun). NTF is attested with a neuter noun or pronoun in the NP (11), e.g. *spivannja*<ACC/NOM\_n> *jakojes' z neba slychano*<NTF\_hear\_impf\_iter>; with pl inan in the NP (4), e.g. *mury*<ACC/NOM\_pl\_inan> *na mnoho miscjach z zemleju zrivnjano*<NTF\_even\_pf>; with mask anim (11), e.g. *koly jeho*<ACC/GEN\_m\_anim> *pryvedeno*<NTF\_bring\_pf> *do cesara*; with mask inan (2), e.g. *Khdy emu učyneno*<NTF\_make\_pf> *uhors'kym obyčajem obchod*<ACC/NOM\_m\_inan>; numeral phrase in the head noun (3), e.g. *bo tam pered tym mnoho*<Q> *vapna žyhano*<NTF\_produce\_impf>; *iž by jej ješče dano*<NTF\_give\_impf> *vol'nyje try*<ACC/NOM\_num> *lita*. Besides, NTF occurs with pres ru copula (1), e.g. *kotoroje bulo nedaleko od Vednja, a teper jest'*<COP\_pres\_ru> *do rakus'koji zemli pryłučono*<NTF\_annex\_pf>; and with past mod ua copula (2), e.g. *z ktoroji bulo*<COP\_past\_ru> *jeho*<ACC/GEN\_m\_anim> *pryvedeno*<NTF\_bring\_pf>; *pole obojej storony trupamy položono*<NTF\_cover\_pf> *bulo*<COP\_past\_ru> (in the last ex *položono* might function as an attribute). There are 6 records of NTF with an *a*-declension noun in the NP, e.g. *kometu*<ACC\_a-decl> *ku vschodu soncja vydeno*<NTF\_see\_impf>; *koly Attilu*<ACC\_a-decl> *korolem obrano*<NTF\_elect\_pf>. CP (33) occurs with past mod ua copula (26) and present ru/pol copula (7);

<sup>114</sup>The following 16<sup>th</sup> c. texts have been selected: *Istorija o Attili, koroli uhors'kom* [A story about Attila, the King of Hungary] 21,719 tokens; *Knyha o pobojišči Mamaja, carja tatars'koho, ot knjazja volodymers'koho i moskvos'koho* [The Book of the Prince's of Volodymyr and Moscow Victory over the Tatar King Mamai], 7,665 tokens.

The 17<sup>th</sup> c. texts below have been selected: *Historija o cesaru ryms'kom Otoni* [A Story about the Roman Caesar Othon], 1,933 tokens; *Historija pravdyvaja o hrabynej Al'tdors'koj* [A True Story about the Countess of Altdorf], 794 tokens; *Historiji, spysaniji vkrotce dlja lipšoji pam'ati* [Stories Briefly Summarized not to Be Forgotten], 4,131 tokens; *Kazannje rus'ke* [A Ruthenian Story], 1,257 tokens; *Povist' o jedyndom koroli, kotoryj hodyv so zlodijem vnoči krasty* [A Story about a King who Went to Steal at Night with a Thief], 1,914 tokens; *Povist' pro Troju* [The Tale of Troy], 3,839 tokens; *Prypovist' o tr'och mladencjach* [The Parable about Three Young Men], 1,146 tokens; *Skazanije o jednom cesari Ioviani* [The Legend about a Caesar Jovian], 3,690 tokens; *Skazanije o jednom ryceri slavnom* [The Legend about a Glorious Knight], 2,062 tokens; *Slovo k pravovirnym chrystianom pro carja Sonchosa* [A Word to the True Christians about the King Sonchos], 2,065 tokens; *Slovo od pateryka o pokuti* [A Priest's Word about Repentance] 1,684 tokens.

it is attested with ot-PP (5), e.g. *Uršulja s pannamy svojimy bula ot uhrov<ot-PP> zabyta<PPP\_murder\_pf>; predkove jeha z stolyc' svojich ot uhrov<ot-PP> buly vyhnani<PPP\_turn ou\_pf>*. There are also a few records of PPP as aorist (5).

The distribution of passivoid phenomena in the 17<sup>th</sup> c. *Knyha o pobojišči Mamaja, carja tatars'koho, ot knjazja volodymers'koho i moskvos'koho* is as follows: CP (5), PPP (5), NTF (7). CP (5) is attested with various copula types, i.e. present ua and past pol copulas, as well as with different agent expressions, that is with ot-PP (2) and inst agent(1), e.g. *ot carja temnyka Mamaja<ot-PP> buv<COP\_past\_mod\_ua> vyhnanyj i zabytyj; zabytyj zostav<COP\_past\_pol> ot Frjag<ot-PP>*; with inst agent in a quote, e.g. „[...] nikoly Lytva ne bula učena knjazjamy rjazans'kymy<INST>...“; with present ru copula (2), e.g. *Pojichavšy, na smert' jest'<COP\_pres\_ru> zabytyj*. There are 5 instances of PPP as aorist, 3 of them co-occur with ot-PP, e.g. *barzo naučen ot dyjavola<ot-PP>*. NTF co-occurs with an *a*-stem noun in the NP (1), e.g. *kotoruju Ordu tatars'kuju<ACC\_a-decl> Zolotoju nazyvano<NTF>*; with a neuter noun/pronoun/numeral-like neuter noun in the NP (3), e.g. *bezčyslennoje množstvo<NUM-like\_n> stvorennja rozumnoho božyjaho pobyto<NTF>*; *toje<ACC/NOM\_pron> napyvano<NTF>*; quantifier in the NP (2), e.g. *iž barzo mnoho<Q> chrystyjan pobyto<NTF>*; with mask anim noun in the NP (1), cf. *i samoho knjazja velykoho Dmytrija<ACC/GEN\_m\_anim> raneno<NTF>*.

In *Historija o cesaru ryms'kom Otoni* there is 2 NTF records e.g. *danno<NTF> hroši; joho nazvano<NTF> Leonom* and 1 CP record, e.g. *by cesarova z tojeji zemli jehypets'koji bula vyhnanna<PPP>*. In *Historiji, spysaniji vkrótce dlja lipšoji pam'ati* the distribution is as follows: PPP (1), CP (4) and NTF (13). CP (4) co-occurs only with past semi-mod ua copula; and once with prez-PP, e.g. *aby prez n'oho<prez-PP> ne odnjata byla<COP\_semi-mod\_ua> moc' vaša*. There are 2 exx for unambiguous accusative case on NTF (13), cf. *by jiji<ACC/GEN\_a-decl> mis'kym pravom sromotne skarano<NTF>*; *I dano<NTF> jim hospodu<ACC\_a-decl> jednu*. NTF is also attested with mask anim in the NP (5), e.g. *od smerti odvolano<NTF> Diokleciana<ACC/GEN\_m\_anim>*; pl anim in the NP (1), e.g. *až jich<ACC/GEN\_pl\_anim> postynano<NTF>*. Besides NTF occurs with prez-PP (1), e.g. *jako joho zhubleno<NTF> prez fal'syvyh rycerov<prez-PP>*; and with past ru copula (1), e.g. *pobih i ne zastav zlodija: odtjato<NTF> bylo<COP\_semi-mod\_ua>*.

In *Povist' o jedynom koroli, kotoryj hodyv so zlodijem vnoči krasty* the distribution is as follows: NTF (3), CP (1) and PPP (1). NTF is attested with morphological accusative case, cf. *zhotovleno<NTF> otrovu<ACC\_a-decl>*.

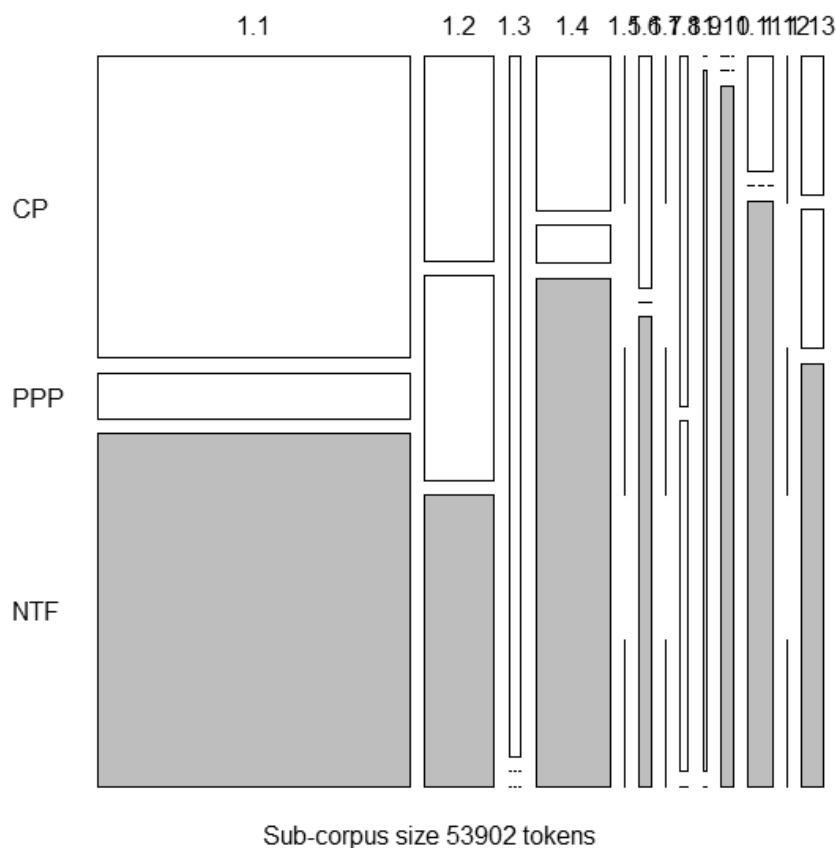
In *Povist' pro Troju* there are 3 records of CP with aorist copula. *Prypovist' o tr'och mladencjach* there has 1 record of PPP and 1 record of CP with present ru copula. The passivoid phenomena in *Skazanije o jednom cesari Ioviani* is distributed as follows: NTF (5

with a head noun; 5 without a head noun), CP (1). CP (1) is attested with past semi-mod ua copula. In *Slovo od paterky o pokuti* NTF (2) occurs with pl anim and mask anim in the NP; as well as with a neuter pronoun (7).



# Chart 6.1.6.a

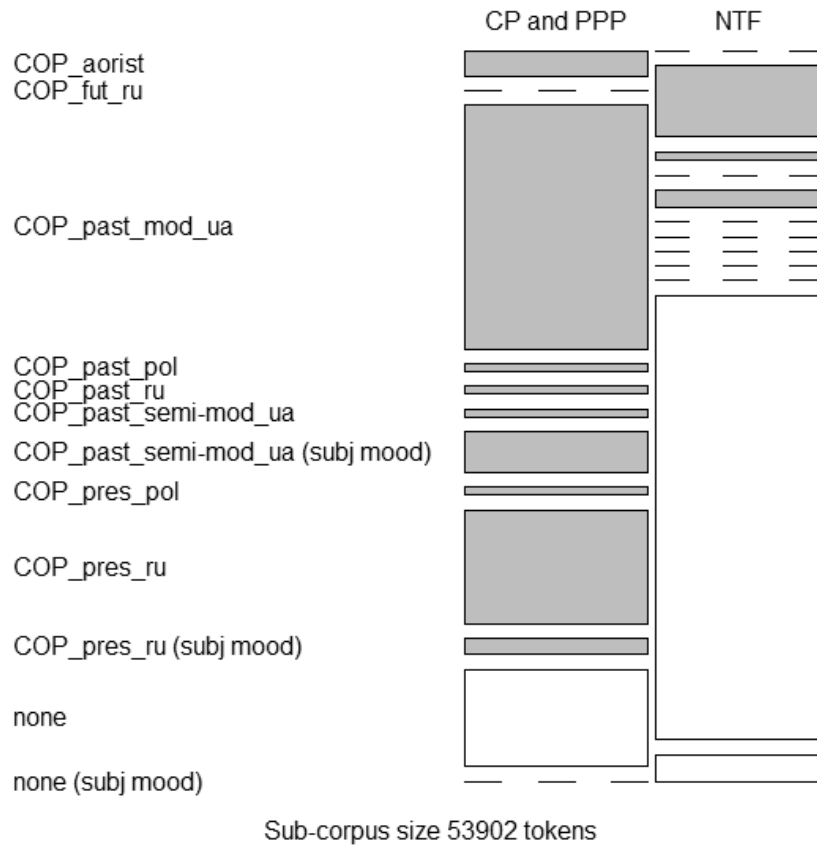
## Distribution of Passivoid Phenomena in Entertaining Fiction



- 1.1 *Istorija o Attili, koroli uhors'kom* [A story about Attila] (16<sup>th</sup> c.), 21,719 tokens
- 1.2 *Knyha o pobojišči Mamaja* [The Book on Victory over the Tatar King] (16<sup>th</sup> c.), 7,665 tokens
- 1.3 *Povist' pro Troju* [The Tale of Troy] (17<sup>th</sup> c.), 3,839 tokens
- 1.4 *Historiji, spysaniji vkrotce* [Stories Briefly Summarized] (1660), 4,131 tokens
- 1.5 *Kazannje rus'ke* [A Ruthenian Story] (17<sup>th</sup> c.), 1,257 tokens
- 1.6 *Historija o cesaru ryms'kom Otoni* [A Story about the Roman Caesar] (17<sup>th</sup> c.), 1,933 tokens
- 1.7 *Slovo k pravovirnym chrystianom* [A Word to the True Christians] (17<sup>th</sup> c.), 2,065 tokens
- 1.8 *Prypovist' o tr'och mladencjach* [The Parable about Three Young Men] (17<sup>th</sup> c.), 1,146 tokens
- 1.9 *Historija pravdyvaja o hrabynej Al'tdors'koj* [A True Story about the Countess of Altdorf] (17<sup>th</sup> c.), 794 tokens
- 1.10 *Slovo od pateryka o pokuti* [A Priest's Word about Repentance] (17<sup>th</sup> c.), 1,684 tokens
- 1.11 *Skazanije o jednom cesari Ioviani* [The Legend about a Caesar Jovian] (17<sup>th</sup> c.), 3,690 tokens
- 1.12 *Skazanije o jednom ryceri slavnom* [The Legend about a Glorious K.] (17<sup>th</sup> c.), 2,062 tokens
- 1.13 *Povist' o jedyndom koroli* [A Story about a King] (17<sup>th</sup> c.), 1,914 tokens

# Chart 6.1.6.b

## Copula Types in Entertaining Fiction



The data frame consists of 134 observations of 2 variables. The independent factor “copula” has 12 levels. The table with numbers is below:

	COP_aorist	COP_fut_ru	COP_past_mod_ua	COP_past_pol	COP_past_ru
CP and PPP	3	0	30	1	1
NTF	0	8	1	0	2

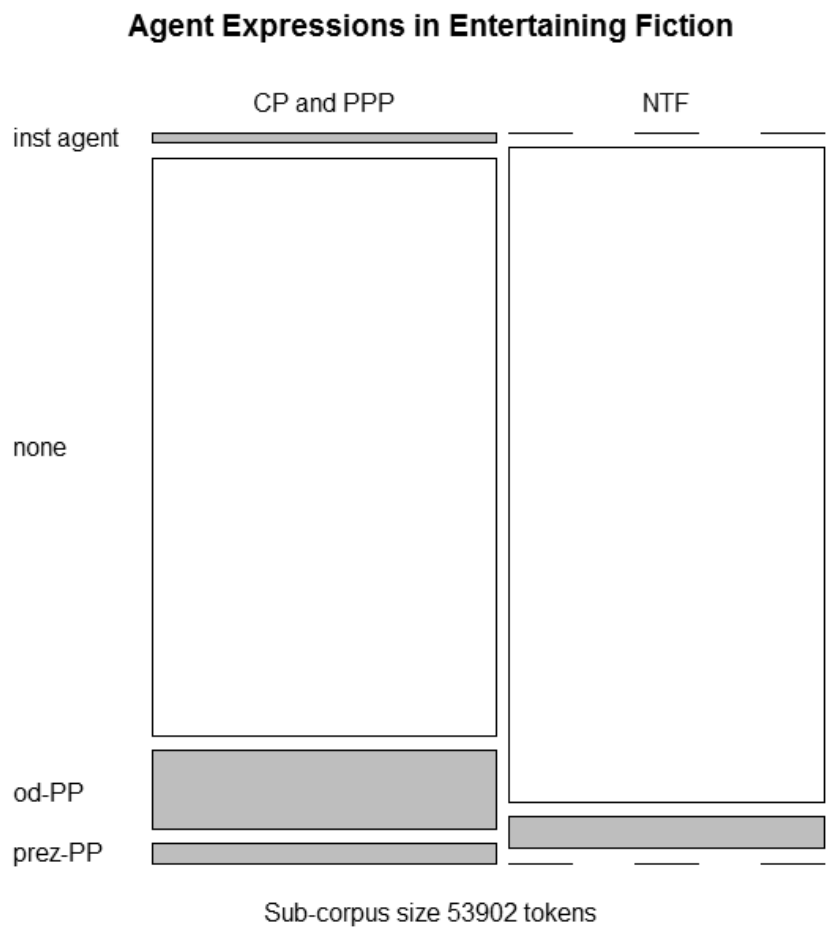
	COP_past_semi-mod_ua	COP_past_semi-mod_ua (subj mood)	COP_pres_pol
CP and PPP	1	5	1
NTF	0	0	0

	COP_pres_ru	COP_pres_ru (subj mood)	none	none (subj mood)
CP and PPP	14	2	12	0
NTF	0	0	50	3

X-squared = 88.6618, df = 11,  $p$ -value = 3.048e-14; Fisher's  $p$ -value < 2.2e-16.

Chart 6.1.6.c

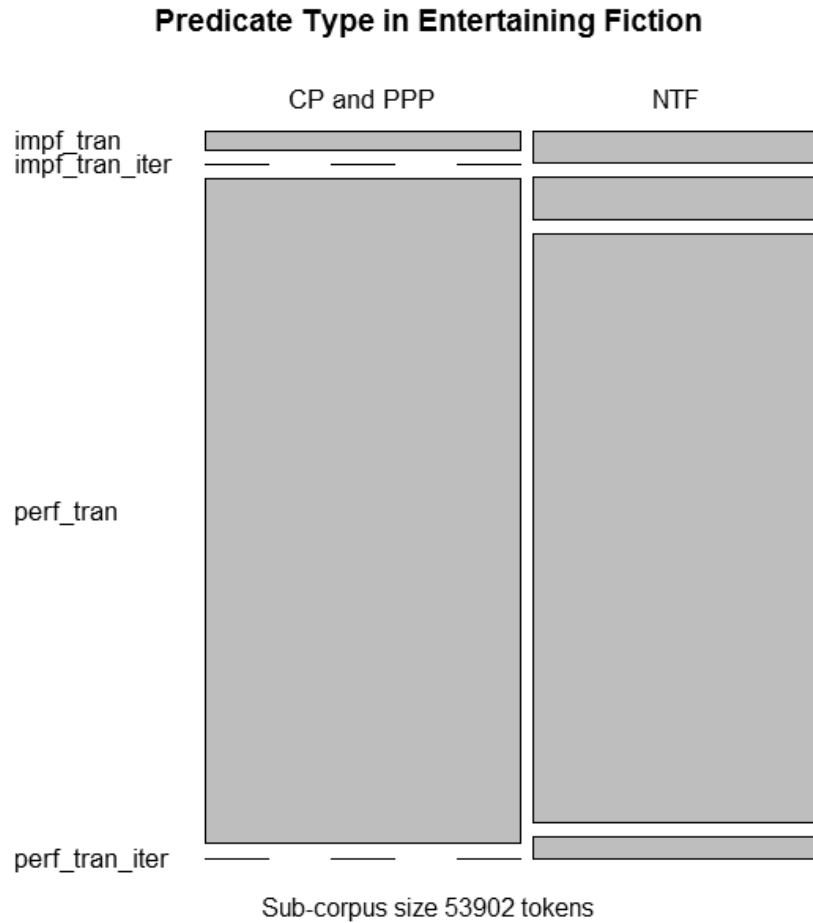


The data frame has 134 observations of 2 variables. The independent variable “agent” has 4 levels. The table with numbers is below:

	inst agent	none	od-PP	prez-PP
CP and PPP	1	59	8	2
NTF	0	61	3	1

X-squared = 5.0475, df = 3, *p*-value = 0.1684; Fisher's *p*-value = 0.1223.

**Chart 6.1.6.d**

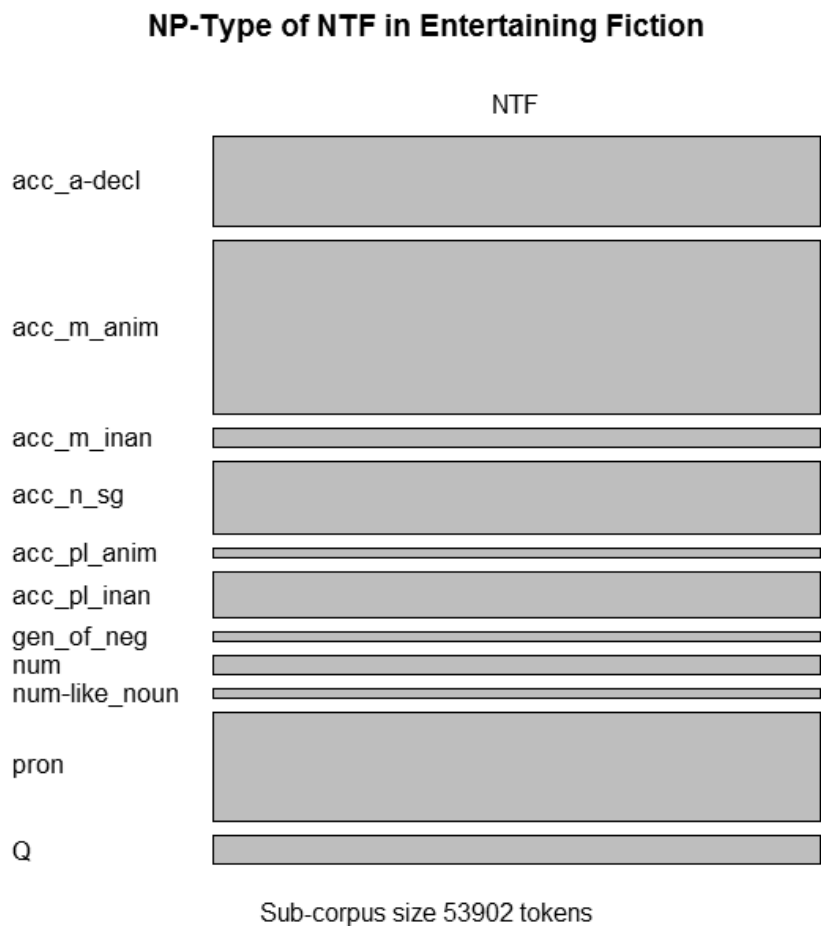


The data frame consists of 134 observations of 2 variables. The independent factor “predicate” has 4 levels. The table with numbers is below.

	impf_tran	imperf_tran_iter	perf-tran	perf_tran_iter
CP and PPP	2	0	68	0
NTF	3	4	55	2

X-squared = 7.32, df = 3,  $p$ -value = 0.06237; Fisher's  $p$ -value = 0.05298.

Chart 6.1.6.e



The data frame consists of 64 observations of 2 variables. The independent factor “NP” has 11 levels. The table with numbers is below:

	acc_a-decl	acc_m_anim	acc_m_inan	acc_n_sg						
NTF	10	19	2	8						
					acc_pl_anim	acc_pl_inan	gen_of_neg	num	num-like	noun
NTF	1	5	1	2	1					pron
										Q
										12
										3

X-squared = 58.719, df = 10, p-value = 6.328e-09.

### Regression Analysis 6.1.6.f Semi-Secular Entertaining Fiction Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Subjunctive\_mood + Copula:Agent + Copula:Predicate\_type +  
Subjunctive\_mood:Agent + Agent:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood Ratio Test		Discrimination Indexes		Rank Discrim. Indexes	
Obs	134	LR chi2	53.89	R2	0,44	C	0,85
NTF	64	d.f.	9	g	5,97	Dxy	0,7
PPP and CP	70	Pr(> chi2)	<0.0001	gr	392,49	gamma	0,77
max	deriv  0.003			gp	0,31	tau-a	0,35
				Brier	0,17		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	-0.6873	0.2733	-2.51	0.0119
Copula	0.4677	0.1344	3.48	0.0005
Subjunctive_mood	-7.8962	51.6965	-0.15	0.8786
Agent	1.3805	1.2549	1.10	0.2713
Predicate_type	-7.2860	38.0050	-0.19	0.8480
Copula * Subjunctive_mood	5.1011	22.0078	0.23	0.8167
Copula * Agent	3.8117	22.7718	0.17	0.8671
Copula * Predicate_type	5.5920	40.7946	0.14	0.8910
Subjunctive_mood * Agent	-38.1586	179.6286	-0.21	0.8318
Agent * Predicate_type	-1.6853	73.3814	-0.02	0.9817

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 88.232, df = 8,  $p$ -value = 1.062e-15; Fisher's  $p$ -value < 2.2e-16.

Subjunctive\_modo: X-squared = 1.5442, df = 1,  $p$ -value = 0.214; Fisher's  $p$ -value = 0.1688.

Agent: X-squared = 5.0475, df = 3,  $p$ -value = 0.1684; Fisher's  $p$ -value = 0.1223.

Predicate\_type: X-squared = 7.32, df = 3,  $p$ -value = 0.06237; Fisher's  $p$ -value = 0.05298.

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test indicates that the logistic regression model fits the data well. Even though this data set is small, the values of the coefficients  $R^2$ , C and Dxy indicate a good predictability of the dependent variable "NTF\_or\_PPP" via the independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood", as well as a moderate fitting capacity of the model. The  $p$ -value for the Factor "Copula" indicates its significance in the model, while the  $p$ -values of the remaining factors „Agent“, „Predicate\_type“ and "Subjunctive\_mood" in this model are too high to reject the null hypothesis. No interaction between the factors can be considered as significant, since all  $p$ -values approach 1. The  $p$ -values in the normality tests generally correspond to their cognate  $p$ -values inside the model, with the exception of the „Predicate\_type“ factor, whose  $p$ -value in the tests is considerably smaller than the same value inside the model, but is still not small enough to be considered significant.

### 6.1.7. Pilgrimage reports, testament of the 1500s, vitae of 1600s [6 texts; 26,393 tokens]<sup>115</sup>

There has been a revival of hagiographic literature in Ukraine due to the Western European and Polish influence in the 17<sup>th</sup> century. In contrast to the earlier Vitae, 17<sup>th</sup> c. life stories of saints are exempt from strong Church Slavonic elements, even though they are still intended as role models in religious education. The texts are written in vernacular with few elements of the Church Slavonic. These short stories are reminiscent of popular folk tales and belong into oral tradition (cf. Danylo Husar Struk, *Encyclopedia of Ukraine online*).

In *Žytie knjaziv Borysa i Hliba* CP (3) is attested with past mod ua copula (2) and present ru copula (1). NTF (5) occurs with mask anim in the NP (1), e.g. *i toho*<ACC/GEN\_m\_anim> *prokoloto*<NTF>; with a quantifier in the NP (1), cf. *hde jich vel'my mnoho potonulo, ale bol'sej*<Q> *na pljacu pobito*<NTF>. The NTF can also be used as modifiers, or attributes, e.g. *Bo koly toje tilo*<ACC/NOM\_n\_sg> *pokyneno*<NTF\_attr> *ležalo*.

In *Žytije knjahyni Ol'hy* NTF (8) is attested with an *a*-stem noun/pronoun in the NP (2), e.g. *Kotoruju*<ACC\_a-decl> *pryprovaženo*<NTF> *jomu* [...] *i* [...] *vdano*<NTF> *jomu za žonu*; *i pochovano*<NTF> *jiji*<ACC/GEN\_a-decl> *z velykym plačem*; with mask anim noun in the NP (1), e.g. *hde ubito*<NTF> *muža*<ACC/GEN\_m\_anim> *mojoho*; with a neuter noun/pronoun in the NP (4), e.g. *misto*<ACC/NOM\_n\_sg> *velykoje Pskov fundovano*<NTF> *vedluh proročestva*; *I vedluh slova jiji nahotovano*<NTF> *tak vse*<ACC/NOM\_pron>; numeral phrase in the NP (1), e.g. *I ubyto*<NTF> *v toj den' p'jat' tysjač*<NUM> *drevljan*. NTF is attested with past mod ua copula (1) in the environment syncretic between nominative and accusative, co-occurring with the complementizer *aby*, cf. *aby*<C> *vse pohanstvo*<ACC/NOM\_n\_sg> *jiji viroju Chrystovoju bulo*<COP\_past\_ua> *prosviščenko*<NTF>. CP (3) is attested with od-PP (2), e.g. *od carja i patriarchy*<ot-PP> *spotkana bula*; *aby-m bula ochreščena od svjatyjšoho patriarchy*<ot-PP>.

In *Žytije knjazja Volodymyra* CP (7) occurs with present ru (1), future ru (1), past ru copula (4) and past semi-mod ua copula (1); and with od-PP (2), e.g. *Od kotorych*<od-PP> *pryslan byv*<COP\_past\_semi-mod\_ua> *na kreščenije Rusi* [...] *mytropolyt Mychajil*. NTF (4) is attested with neuter noun in the NP (2), e.g. *Tilo*<ACC/NOM\_n\_sg> *joho svjatoje položeno*<NTF> *v Kyjevi*; pl anim in the NP (1), e.g. *hdy nas*<ACC/GEN\_pl\_anim> *vprovažono*<NTF> *v cerkov*; pl inan in the NP (1), e.g. *majetnosti*<ACC/NOM\_pl\_inan> *i dostojinstva*<ACC/NOM\_pl\_inan> *odbyrano*<NTF>. NTF occurs with genitive of negation (1) e.g. *i kamnej*<GEN\_pl\_inan> *ohnem ne*<NEG> *bylo*<COP\_past\_ru> *narušono*<NTF>.

<sup>115</sup>Pilgrimage reports: *Perehrynacija, ili put' do Ijerusalyma* [The Journey or the Way to Jerusalem] 5,522 tokens; *Poklonenije do svjatocho hrada Ijerusalyma* [Adoration of the Holy City of Jerusalem], 251 tokens. Testament: *Duchovnoje zavěščanie Zahorovskoho* [The Spiritual Testament of Zahorovsky], written in 1579 by Vasyl' Zahorovs'kyj, 8,750 tokens. Vitae: *Žytije knjahyni Ol'hy* [The Life of Princess Ol'ha] 4,222 tokens; *Žytije knjaziv Borysa i Hliba* [The Life of Princes Borys and Hlib], 2,683 tokens; *Žytije knjazja Volodymyra* [The Life of Prince Volodymyr] 4,965 tokens.

In *Perehrynacija, ili put' do Ijerusalyma* CP (3) occurs with present ru (1), past ru (1) and aorist copula (1); and with ot-PP (1), e.g. *Na tom misci ubijen byst'<COP\_aor> kamenijem ot iudej<ot-PP>*. PPP (11) is attested with ot-PP (1), e.g. *Tu byl prežde monastyr, teper jeho nist', rozoren ot pohan<ot-PP>*; with inst agent (1), e.g. *kamen' bilyj, samorodnyj, bohom<INST> poslan*. NTF (13 with a head noun; 1 with a null argument; 1 used as attribute; 5 without a head noun) is attested with neuter noun in the NP (5), e.g. *V oltari zmalevano<NTF> vovedenije<ACC/NOM\_n\_sg>*; with mask inan, i.e. (3), e.g. *prestol<ACC/NOM\_m\_inan> vysok zhotovano<NTF>*; with pl inan in the NP (1), e.g. *Stiny<ACC/NOM\_pl\_inan> jeji marmurovymy doškamy dorohymy zbudovano<NTF>*; with a numeral phrase (2), e.g. *Tu jest' peščer mnoho<Q> v kameni vysičeno<NTF>*. NTF occurs with ot-PP (1), e.g. *bo tam svjatyh mnoho<Q> potopleno<NTF> ot pohan<ot-PP> Chrysta radi*; and with inst agent (1), e.g. *Okolo neho pomoščeno<NTF> dno bohom<INST> vkruh plytamy marmurovymy*. Besides NTF is attested with past ru copula (1) and present ru copula (1). Both exx are syncretic between nominative and accusative, e.g. *predy tam toje misce<ACC/NOM\_n\_sg> bylo<COP\_past\_ru> opuščeno<NTF>*; *Toje misce<ACC/NOM\_n\_sg> jest'<COP\_pres\_ru> obudovano<NTF> komoramy*. There is one ex of NTF used as attribute, cf. *Bezvodno misto toje i sucho, no krasno stojit' okolo kamenem ohraždeno<NTF\_attr>*.

*Duchovnoje zavěščanije Zahorovskoho* was written in 1579 by a gentleman from Volynia, a historic region in North-Western part of Ukraine with a peculiar Eastern Slavonic dialect and a well established chancellery language with little variation (different from Central Ukrainian ones). Shevelov (1979, 577) remarks that “[f]or about two decades after the Union of Lublin the traditional Ruthenian chancery language continued to be used by inertia in the administration documents... as well as in privately issued documents as, e.g., in the testament of Vasyl' Zahorovs'kyj”. The second text that belongs into this sub-corpus, *Litopys Jana Binvil's'koho*, was written in Kiev in the first half of the 17<sup>th</sup> c.

The distribution of passivoid phenomena in *Duchovnoje zavěščanije Zahorovskoho* is as below: CP (17), PPP (5), NTF (9 with a head noun; 4 without a head noun). PPP as narration mode (5) is attested with čerez-PP (1), e.g. *čerez Mamaja Deveeviča murzu i inych murz<čerez-PP>*, [...] *obbit<PPP> i pohromlen<PPP>*; as well as with od/ot-PP (2), e.g. *khdy skrynki moee*, [...] *od tych tatar<ot-PP>*, *kotorye mene u vezen'e svoe vzjaly, pometany<PPP>*. NTF occurs with a neuter noun/pronoun in the NP (3), e.g. *iž to<ACC/NOM\_pron> ej, z laski moee otcovskoe, dano<NTF>*; with a numeral phrase/quantifier as a head noun (5), e.g. *dvadcat'<NUM> kop hrošej vydano<NTF>*; *bo na to dereva v Puzove nemalo<Q> navoženo<NTF>*. NTF is attested with ot-PP (1), cf. *tam že i nemalo<Q> maetnosti moee ot tych neprijatelej<ot-PP>*, *pohanstva tatar, pobrano<NTF>*. Besides NTF is attested with past ru copula (3), all of them co-occurring with a



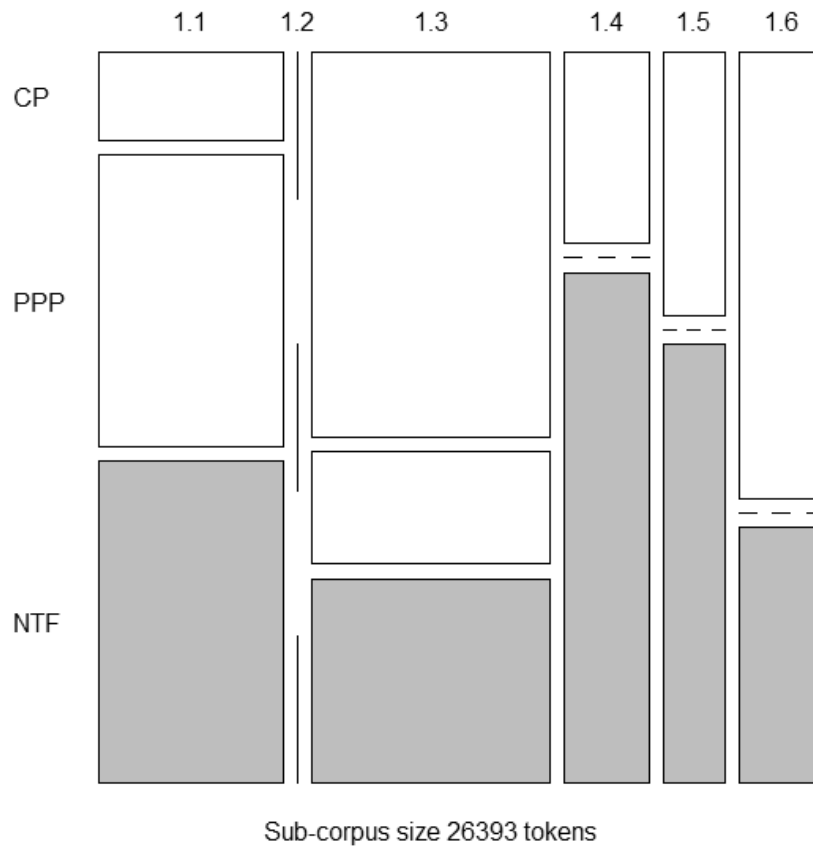
complementizers *žeby* or *aby*, and exclusively in the environment syncretic between nominative and accusative, i.e. with a quantifier/numeral phrase/pronoun in the NP, cf. *mnoho<Q> zbožja muki y inšych rečej*, [...] *žeby<C> v koždyj hod davano<NTF> bylo<COP\_past\_ru>*; *aby<C> v koždyi hod na vbohie, k tomu špitalju, muki žitnoe po dvadcjati čotyre maci<unit\_measur>* [...] *davano<NTF> bylo<COP\_past\_ru>*; *i aby<C> vse to<ACC/NOM\_pron>*, [...], *otdavano<NTF> bylo<COP\_past\_ru>*. CP in this text is attested with present ru (3), future ru (1), past ru copula (13), and possibly with ot-PP (1), cf. *aby ot Zemna v hranicy imenju mojemu Suchodolam ot knjaza Čortoryskoho<ot-PP> pokoj vdelan byl*<sup>116</sup>; as well as with čerez-PP, e.g. *aby na koždyj den chvala bohu miloserdnomu i služba čerez nich<čerez-PP> činena byla*.

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<sup>116</sup> This ot-PP ex is however ambiguous.

# Chart 6.1.7.a

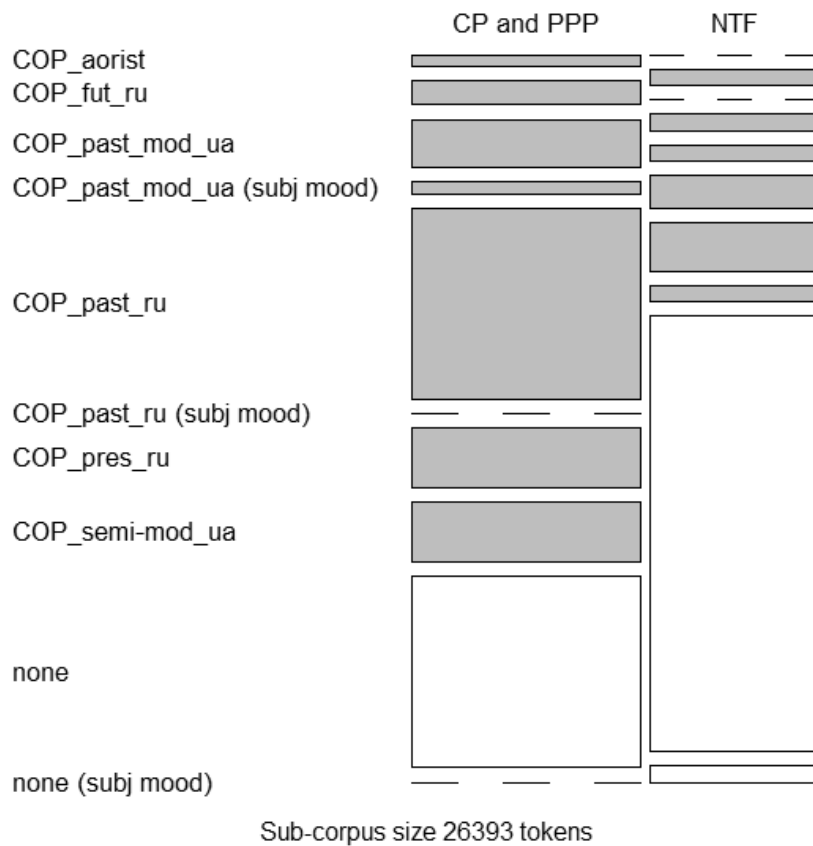
## Distribution of Passivoid Phenomena in Pilgrimage Reports, in a Spiritual Testament, and Vitae



- 1.1 *Perehrynacija, ili put' do Ijerusalyma* [The Journey or the Way to Jerusalem] (mid-16<sup>th</sup> c.), 5,522 tokens
- 1.2 *Poklonenije do svjatohto hrada Ijerusalyma* [Adoration of the Holy City of Jerusalem] (mid-16<sup>th</sup> c.), 251 tokens
- 1.3 *Duchovnoje zavěščanie Zahorovskoho* [The Spiritual Testament of Zahorovsky] (1579) by Vasyl' Zahorovs'kyj, 8,750 tokens
- 1.4 *Žytije knjahyni Ol'hy* [The Life of Princess Ol'ha] (17<sup>th</sup> c.), 4,222 tokens
- 1.5 *Žytije knjaziv Borysa i Hliba* [The Life of Princes Borys and Hlib] (17<sup>th</sup> c.), 2,683 tokens
- 1.6 *Žytije knjazja Volodymyra* [The Life of Prince Volodymyr] (17<sup>th</sup> c.), 4,965 tokens

# Chart 6.1.7.b

## Copula Types in Pilgrimage Reports in a Spiritual Testament, and Vitae



The data frame consists of 87 observations of 2 variables. The independent factor “copula” has 10 levels. The table with numbers is below:

	COP_aorist	COP_fut_ru	COP_past_mod_ua	COP_past_mod_ua (subj mood)
CP and PPP	1	2	4	1
NTF	0	1	0	1

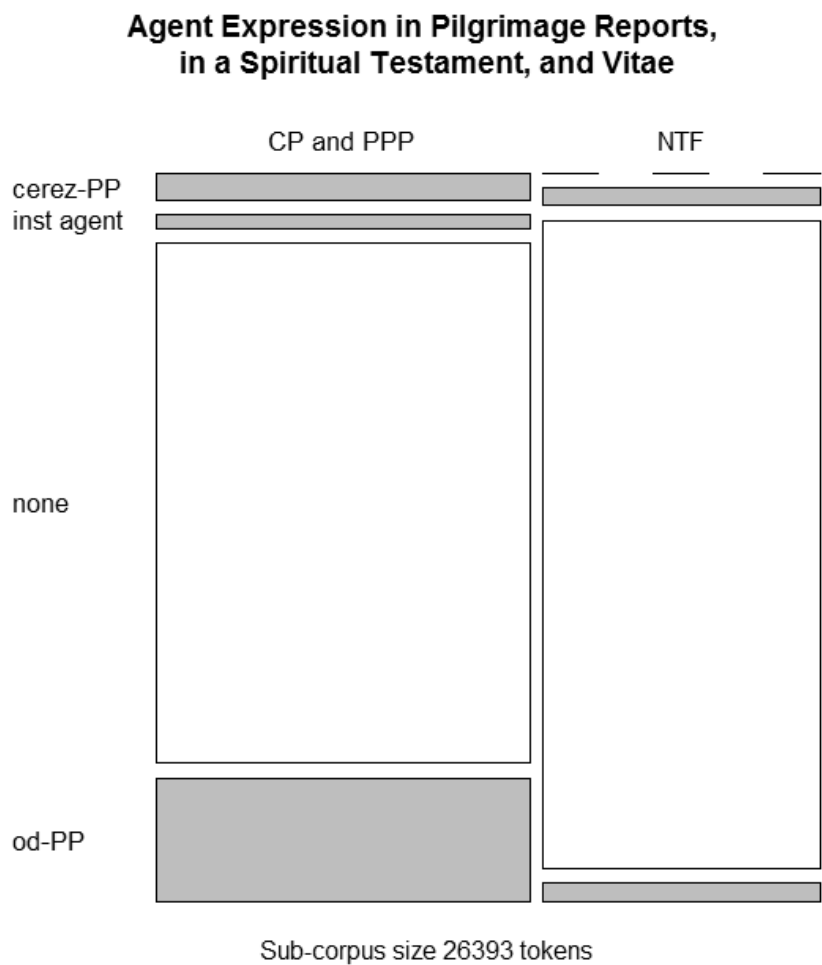
	COP_past_ru	COP_past_ru (subj mood)	COP_pres_ru	COP_semi-mod-ua
CP and PPP	16	0	5	5
NTF	1	2	3	1

	none	none (subj mood)
CP and PPP	16	0
NTF	27	1

X-squared = 26.192, df = 9, *p*-value = 0.001901; Fisher's *p*-value = 7.531e-0.5.

Chart 6.1.7.c



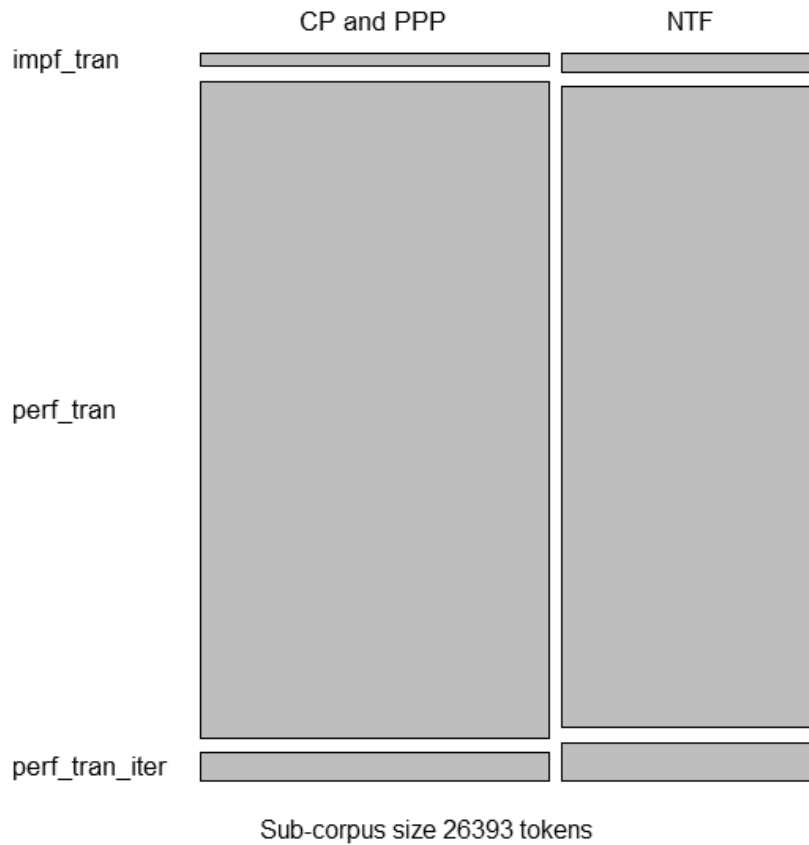
The data frame consists of 87 observations of 2 variables. The independent factor “agent” has 4 levels. The table with data is below:

	cerez-PP	inst agent	none	od-PP
CP and PPP	2	1	38	9
NTF	0	1	35	1

X-squared = 6.731, df = 3, *p*-value = 0.08098; Fisher's *p*-value = 0.04328.

## Chart 6.1.7.d

**Predicate Types in Pilgrimage Reports,  
in a Spiritual Testament, and Vitae**

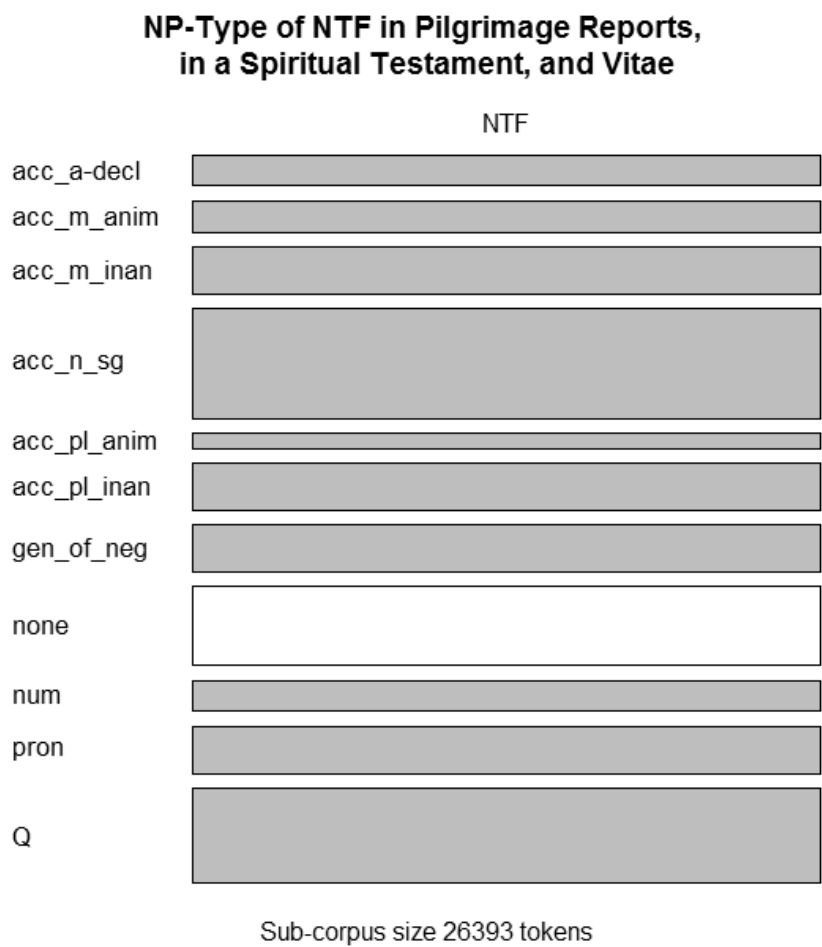


The data frame consists of 87 observations of 2 variables. The independent factor “predicate” has 3 levels. The table with the data is below:

	impf_tran	perf_tran	perf_tran_iter
CP and PPP	1	47	2
NTF	1	34	2

X-squared = 0.1472, df = 2, *p*-value = 0.9291; Fisher's *p*-value = 1.

Chart 6.1.7.e



The data frame of 37 observations of 2 variables. The independent factor “NP” has 11 levels. The table below summarizes the distribution of obtained data.

	acc_a-decl	acc_m_anim	acc_m_inan	acc_n_sg	
NTF2	2	3	7		
	acc_pl_anim	acc_pl_inan	gen_of_neg	none	num
NTF1	3	3	5	2	3
					Q
					6

X-squared = 10.27, df = 10, p-value = 0.4171.

### Regression Analysis 6.1.7.f

#### Pilgrimage report, Vitas and Spiritual Testament

#### Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Subjunctive\_mood + Copula:Agent + Copula:Predicate\_type +  
Subjunctive\_mood:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	87	LR chi2	30,82	R2	0,4	C	0,83
NTF	37	d.f.	8	g	4,06	Dxy	0,66
PPP and CP50		Pr(> chi2)	0.0002	gr	58	gamma	0,76
max	deriv			gp	0,295	tau-a	0,327
	0.005			Brier	0,166		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	-0.4898	0.3302	-1.48	0.1380
Copula	0.6596	0.2341	2.82	0.0048
Subjunctive_mood	-9.2671	91.5869	-0.10	0.9194
Agent	0.9431	0.6002	1.57	0.1161
Predicate_type	-0.4130	0.9899	-0.42	0.6765
Copula * Subjunctive_mood	-0.1050	20.1718	-0.01	0.9958
Copula * Agent	2.6009	9.0958	0.29	0.7749
Copula * Predicate_type	2.3082	17.9153	0.13	0.8975
Subjunctive_mood * Predicate_type	-4.5012	67.9765	-0.07	0.9472

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 17.789, df = 6,  $p$ -value = 0.006782; Fisher's  $p$ -value = 0.002214.

Subjunctive\_mood: X-squared = 1.6379, df = 1,  $p$ -value = 0.2006; Fisher's  $p$ -value = 0.1585.

Agent: X-squared = 6.731, df = 3,  $p$ -value = 0.08098; Fisher's  $p$ -value = 0.04328.

Predicate\_type: X-squared = 0.14718, df = 2,  $p$ -value = 0.9291; Fisher's  $p$ -value = 1.

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test indicates that the logistic regression model fits the data well. The values of the coefficients  $R^2$ , C and Dxy indicate a good predictability of the dependent variable "NTF\_or\_PPP" via the independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood", as well as an acceptable fit of the model. The  $p$ -value for the Factors "Copula" is small enough to reject the null hypothesis, while the  $p$ -values of the remaining factors "Agent", "Predicate\_type" and "Subjunctive\_mood" in this model are consistent with the null hypothesis, or the statement that these factors do not contribute to the values of the variable NTF\_or\_PPP. The interactions between different factors cannot be considered significant, since their  $p$ -values are approaching 1. The  $p$ -values in the tests are not drastically different from their cognate values inside the regression model.

### 6.1.8. Poetry of 1500s, 1600s and of 1700s [10 collections and 3 texts; 89,501 tokens]<sup>117</sup>

This sub-corpus consists of many smaller rhymed texts. The 16<sup>th</sup> c. Ukrainian poetry is of strictly religious thematic. The language employed is Church Slavonic of Ruthenian recension with deviations into vernacular. Most of the poems are of unknown authorship.

The prevailing construction type in Kyjevo-Mychajlivs'kyj collection, a 16<sup>th</sup> c. religious poetry is PPP (43), that is attested with ot-PP (2), e.g. *ot Christa<ot-PP> izhnana; Ot ducha svjatohto<ot-PP> i mlekom pitana*; and with inst agent (3), e.g. *v'' trjeh ipostasjeh nami<INST> počitannyj; spasitelem našym<INST> prisno v''zljublenna; Duchom blahodati<INST> sušče poroženi*. CP (5) is attested with past ru copula (2), present ru copula (1), aorist copula (2); as well as with inst agent (1), i.e. *I toboju<INST> byli vsehda poběždeni*. NTF (6) is attested with mask anim noun in the NP (2), e.g. *Na ktorom raspjato<NTF> spasitelja Christa<ACC/GEN\_m\_anim>; jeha<ACC/GEN\_m\_anim> že pravednym davno vhotovano<NTF>*; mask inan in the NP (1), e.g. *Novyj Ijerusalym<ACC/NOM\_m\_inan> hodne ukrašeno<NTF>*; neuter noun in the NP (2). Besides NTF occurs with present ru iterative (1), and past ru copula (1), e.g. *Slovo<ACC/NOM\_n\_sg> vaše da byvajet<COP\_pres\_iter> v'' blahodat'/soliju rastvoreno<NTF>; vam bo sije otroča<ACC/NOM\_n\_sg> darovano<NTF> bylo<COP\_past\_ru>*.

In the selected poetry by Pamvo Berynda CP (17) co-occurs with prez"-PP (1), e.g. *Kotraja to prez"<prez-PP> dětok jest dekljamovana*; and ot-PP (2), e.g. *Bud' ot nas<ot-PP>, pastuchov tych, nyně pozdrovena*. PPP (27) is attested with ot-PP (6), e.g. *I ot tohožde ducha<ot-PP> oba naučeny; I ot prečistoi matki<ot-PP> vdjačne prinjaty*. NTF records (2) co-occur with a neuter noun in the NP and a past ru copula, e.g. *I zloto<ACC/NOM\_n\_sg>, jak'' krolevi, bylo<COP\_past\_ru> tež otdano<NTF>; Prez'' ščo carstvo<ACC/NOM\_n\_sg> jeha bylo<COP\_past\_ru> fikhurovano<NTF>*.

In Zahorovs'kyj collection CP (15) is attested with past ru copula (3), present ru copula (8), future ru copula (4); as well as with inst agent (3), e.g. *byli upražnjeny/i vo zlověriy bėsom<INST> oslěpleny; vsi bo jeste bohom<INST> vo věru prizvany*; with ot"-PP (1), i.e.: *ot''*

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<sup>117</sup>We have selected three large 16<sup>th</sup> c. verse collections: Kyjevo-Mychajlivs'kyj collection, 8,354 tokens; Pamvo Berynda's selected poetry, 6,507 tokens; and Zahorovs'kyj collection, 7,551 tokens (22,412 tokens altogether).

The following 17<sup>th</sup> c. verse collections have been scrutinized: the collection of Historical poetry, 10,424 tokens; the elegy *Na žalosnyj pohreb zacnoho rycera Petra Konaševyča Sahajdačnoho* by Kasijan Sakovyč, 5,910 tokens; poetry by Dymytrij Tuptalo, 16,315 tokens; poetry by Joanykij Haljatovs'kyj, 1,471 tokens (34,120 tokens altogether).

The 18<sup>th</sup> c. poems and drama pieces below have been selected: *Herojični stychy* by Ioann (1784), 2,827 tokens; Songs and poems by unknown authors, 9,103 tokens; *Vertep*, 6,404 tokens; *Oraciji* 6,705; *Komyčes'koje dijsvije* (1736) by Mytrofan Dovhalevs'kyj, 3,147 tokens; *Voskresenije mertvyh* (1746) by Heorhij Konys'kyj 4,783 tokens (32,969 tokens altogether).



*sv[jaty]ch patriarchov<ot-PP>/prosvěščeny jes'my*. There are records for PPP (14), e.g. *Velikaja vam slava pered bohom dana*. NTF (13) occurs with nouns of *a*-declension (2), e.g. *i vsju vselennuju<ACC\_a-decl> bohovi pryzvano<NTF>*; *aby žydovskuju paschu<ACC\_a-decl> prazdnovano<NTF>*; with pl inan in the NP (1), e.g. *i ot'' svjatykh otec kanony<ACC/NOM\_pl\_inan> stverženo<NTF>*; with mask anim in the NP (1), e.g. *Tam'' pravdivyj agnec'<ACC/NOM\_m\_anim> s'' kostela izgnano<NTF>*; with a neuter noun in the NP (7), e.g. *Daby imja<ACC/NOM\_n\_sg> jeho v'' Rusi veličano<NTF>*. NTF occurs with present ru copula (2), e.g. *hdě jest'<COP\_pres\_ru> pochuleno<NTF> hospodneje imja<ACC/NOM\_n\_sg>*; *Ale drevo ot'' ploda byvajet<COP\_pres\_ru\_iter> poznano<NTF>*. NTF is attested with *ot''*-PP (2), e.g. *Svjatoje načalo ot'' nich<ot-PP> nam javlenno<NTF>*; and *isnt of agent* (1), e.g. *Iže svjatym duchom<INST> pis'mo nam podano<NTF>*. Besides NTF is attested with genitive of negation (1), e.g. *I svjatoho Petra<ACC/GEN\_m\_anim> tak'' ne<NEG> zapovědano<NTF>*.

The vernacular element in the 17<sup>th</sup> c. Ukrainian poetry has grown substantially in comparison to the 16<sup>th</sup> c. In the poems by Kasijan Sakovyč CP (5) is attested with past ru copula (2), present ru copula (1), present pol copula (1), future ru copula (1). There are 3 records of PPP as aorist. NTF (12) occurs with a noun of *a*-declension in the NP (1), e.g. *Pry kotorom holovu<ACC\_a-decl> jakoho mertvoho/Kladeno<NTF>*; with a neuter noun/pronoun in the NP (4), e.g. *tělo<ACC/NOM\_n\_sg> jest' pokryto<NTF>*; with pl inan in the NP (4), e.g. *V hutě Volkanovoj ej robleno<NTF> sokiry<NOM/ACC\_pl\_inan>/I strěly<NOM/ACC\_pl\_inan> hartovano<NTF> ostryi bez'' měry*; mask anim in the NP (1), e.g. *Khdy by o dokončenju hrobu jeho<ACC/GEN\_m\_anim> pytano<NTF>*; pl anim in the NP (1), e.g. *khdy ich<ACC/GEN\_pl\_an> pohrebano<NTF>*; with fem non-*a*-declension noun in the NP (1), e.g. *A to, žeby mu často smert'<NOM/ACC\_fem\_non-a-decl> pripominano<NTF>*. NTF is attested with present ru (1), past ru (1) and future ru copula (1); these exx however, having neuter noun/pronoun NPs can all be instances of agreeing passives, cf. *Kotoroje<ACC/NOM\_n\_sg> roskošne tut bylo<COP\_past\_ru> tučeno<NTF>*. NTF occurs with *inst agent* (1), e.g. *To čynjano<NTF> cesarom<INST> v'' Konstantinopolju*; and *ot-PP* used as an instrument of means, e.g. *Tělo zas' v zemli budet ot červij<ot-PP> točeno<NTF>*.

The language of the poetry of Dymytrij Tuptalo, who was born to a Cossack family, is Ukrainian Church Slavonic. Tuptalo executed strong influence upon the Russian Orthodox world at the turn of the 17<sup>th</sup> c. In the poems we analyzed, there is no *-no*, *-to* construction that would bear morphological accusative case. NTF (13) occurs predominantly with a neuter noun/pronoun as a head (9), that is in environment syncretic between nominative and accusative, e.g. *mně serdce<ACC/NOM\_n\_sg> ujazvlenno<NTF>*; *ti lice<ACC/NOM\_n\_sg> pomračenno<NTF>*; *nebo<ACC/NOM\_n\_sg> zatvorenno<NTF>*. NTF is also attested with a personal pronoun „you“ (3), e.g. *daby tja<ACC/GEN\_pron> vlečenno<NTF>*; *tja<ACC/GEN\_pron> okrovavlenno<NTF>*; as well as with mask

anim in the NP (1), e.g. *Bo hot jeho*<ACC/GEN\_m\_anim> *na try dni vo hrobě schovano*<NTF>. CP (30) occurs with future ru copula (12); present ru copula (8), cf. *jehda ot lvov*<ot-PP> *sndennyj byvajet*<COP\_pres\_ru\_iter>; aorist copula (7); past ru copula (1); past semi-mod ua copula (1), cf. *Ot ikonomach že byv*<COP\_past\_semi-mod\_ua> *usěčen rukoju*; past semi-pol hybrid ua coupla (1), cf. *v krov si ahnču omočen stalsja*<COP\_past\_semi-pol> *sokrušennyj*. PPP as aorist (36) occurs with ot-PP (3), e.g. *Vsja desjat' zapovědej ot nich*<ot-PP> *ispolnenna*. Besides, NTF is attested in attributive function (2), cf. *Dažd mi horě iměti serdce sochranenno*<NTF\_attr>/*nebesi dostojnymi děly ukrašenko*<NTF\_attr>.

In the poetry by Joanykij Haljatovs'kyj CP (3) is attested with future ru (2) and present ru (1) copula. PPP as aorist (1) is attested with ot-PP, e.g. *Z neba jest ot Boha*<ot-PP> *poslannyj*.

In *Ljament*, a long poem by Meletij Smotryc'kyj, CP (3) occurs with present ru (2) and future ru (1) copula; as well as with ot"-PP (1), e.g. *Posažon jest' ot" boha*<ot-PP> *pred" dom tvoj*. There is 1 PPP as aorist. NTF (3) occurs with a personal pronoun as a head (1), e.g. *že tja*<ACC/GEN\_pron> *tym skarano*<NTF>; and a neuter pronoun as head (1), e.g. *što*<ACC/NOM\_pron> *t'*<dano><NTF>. There is 1 record of genitive of negation on NTF, e.g. *bohatsva*<GEN\_n\_sg> *ne*<GEN> *dano*<NTF>.

In Historical poetry collection, the PPP (25) is attested with ot/od-PP (6), e.g. *Ot skifov*<ot-PP> *plenenna*; *Ot ljacha*<ot-PP> *v ljutyx utěsnajema*; and with prez-PP (1), e.g. *Prez kurucov*<prez-PP> *v Klokočeve cerkov spalena*; inst agent (1), e.g. *Za najmocnijšuju tarč v herbu Chmel'nyc'kym*<INST> *danyj/Chrest Chrystov*. CP (5) occurs with present ru (3), future ru (1) copula, and pol present copula (1), e.g. *Ta jeste-s'te*<COP\_pol\_pres> *dobre byti*. NTF (10) is attested with pl anim in the NP (5), e.g. *I do Pol'sči jich*<ACC/GEN\_pl\_anim> *zabrano*<NTF>; quantifier in the NP (1), e.g. *Jako psov, mnoho*<Q> *nabyto*<NTF>; pl inan as a head (1); neuter noun (1); mask inan as a head (1); mask anim as a head (1). NTF is also attested with partitive genitive, e.g. *z harmat ohnja*<GEN\_part> *dano*<NTF>. There is one ex of NTF with copula, which, however, can be an instance of canonical passive, e.g. *V p'jatnycju rano ušykovano*<NTF>/*Vojs[']ko do boju bylo*<COP\_past\_ru>.

In *Heroični stychy* by Ioann CP (11) is attested with past mod ua copula (7), with future ru copula (1), with past semi-pol copula (3), e.g. *Cerkvy ot uniji staly*<COP\_semi-pol> *očyščenni*. PPP (14) co-occurs with inst agent (1), e.g. *Kozakamy*<INST> *zbyti, al'bo rozohnani*. NTF (4) occurs with an *a*-stem noun in the NP (1) and inst by-phrase, e.g. *Tysjaču*<ACC\_a-decl> *vozov skarbných vzjato*<NTF> *kozakamy*<INST>; as well as with pl anim in the NP (3), e.g. *Vsich ljachov*<ACC/GEN\_pl\_anim> *izbyto*<NTF>, *het'manov*<ACC/GEN\_pl\_anim> *zabrano*<NTF>.

In lyrical Songs and Poems by unknown authors NTF (5) occurs with pl inan in the NP

(3), e.g. *mista*<ACC/NOM\_pl\_inan> *popaleno*<NTF>; *zamky*<ACC/NOM\_pl\_inan> *polamano*<NTF>; neuter pronoun in the NP (1); mask anim in the NP (1), e.g. *ščo ho*<ACC/GEN\_m\_anim> *syrotov zvano*<NTF>. There are 4 records of PPP as aorist, 2 of them might occur with a shortened hybrid copula, i.e. *to že-s'*<COP\_hyb> *ukrašenyj*; *to že-s'*<COP\_hyb> *spustošenyj*. PPP is attested with ot-PP (1), e.g. *Ot pohanov tyranov*<ot-PP> *barzo spustošena*. CP (1) occurs with present ru copula and inst agent, cf. *I okrutnymi zviramy*<INST> *rožne sut' rozneseni*.

In *Vertep* there is very few passivoid phenomena, PPP as aorist (2) occurs with ot-PP (1), e.g. *od Smerti*<od-PP> *posičen kosoju*. There is 1 CP and 1 NTF record with neuter noun in the NP.

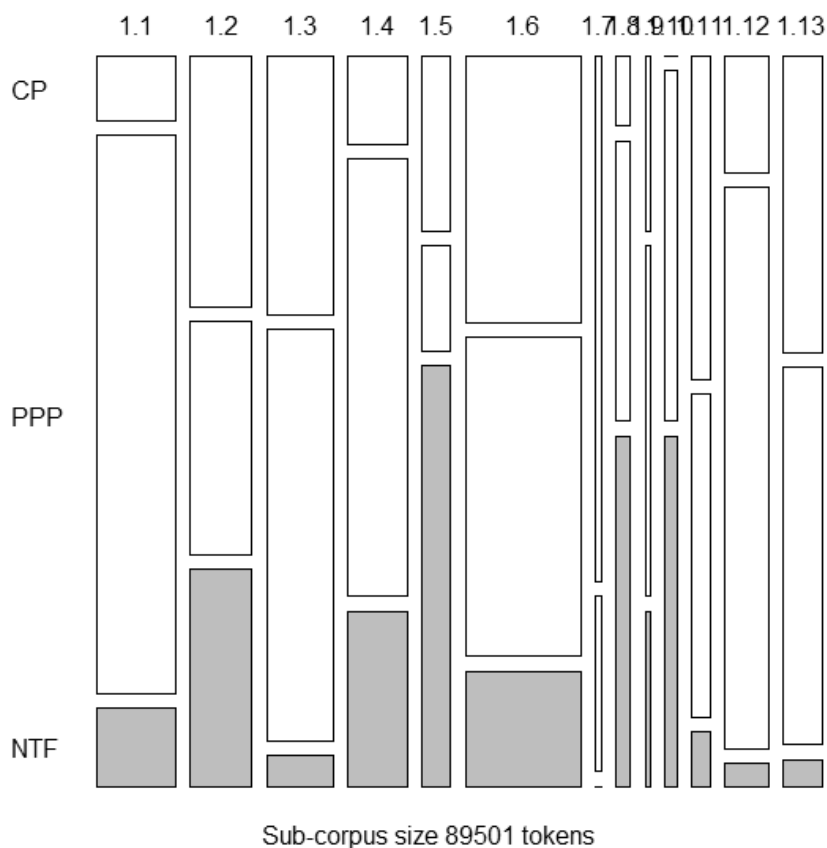
In poems *Oraciji*, NTF (4) is attested with personal pronoun in the NP (2), e.g. *Koly mene*<ACC\_pron> *horivkoju šmarovano*<NTF>; with a neuter pronoun as a head (1), cf. *Tak tež i na kuchni nyč*<ACC/NOM\_pron> *ne hotovleno*<NTF>; mask inan as a head (1), e.g. *A spodok*<ACC/NOM\_m\_inan> *dryžanom slične ukrašeno*<NTF>. There is no CP construction and 4 records of PPP as aorist.

In *Voskresenije mertvych* (1746) by Heorhij Konys'kyj the prevailing construction type is the participial passive (24). PPP co-occur with two prepositional phrases denoting an agent, ot-PP (1), e.g. *v polusmert' prybytyj ot Dioktyta*<ot-PP>; and inst agent (2), e.g. *ohrablennyj i ubyt toboju*<INST>. CP (5) is used with aorist copula (1), e.g. *I ot soncja istyny ne bych*<COP\_aor> *prosliščennyj*; with future ru copula (1), e.g. *ves' mir budet*<COP\_fut-ru> *ožyvlennyj*; present ru copula (3), e.g. *Domašnji bezvisno vsi sut'*<COP\_pres\_ru> *rozohnani*. There is only 1 NTF record with neuter noun in the NP, e.g. *Nebo*<ACC/NOM\_n> *danno*<NTF\_give\_impf>.

In *Komyčes'koje dijestvije* (1736) by Mytrofan Dovhalevs'kyj PPP (6) is attested with ot-PP (1), e.g. *koren' moj ot divy*<ot-PP> *roždennyj*. CP (6) is also attested with ot-PP (1), cf. *Razvi sam budet ot neho*<ot-PP> *pobiždennyj*. CP (6) occurs with present ru (3) and future ru (3) copula. There is 1 NTF record with a neuter noun as a head, e.g. *Pervoje bo z Kajinom misto*<ACC/NOM\_n> *označeenno*<NTF\_pf>.

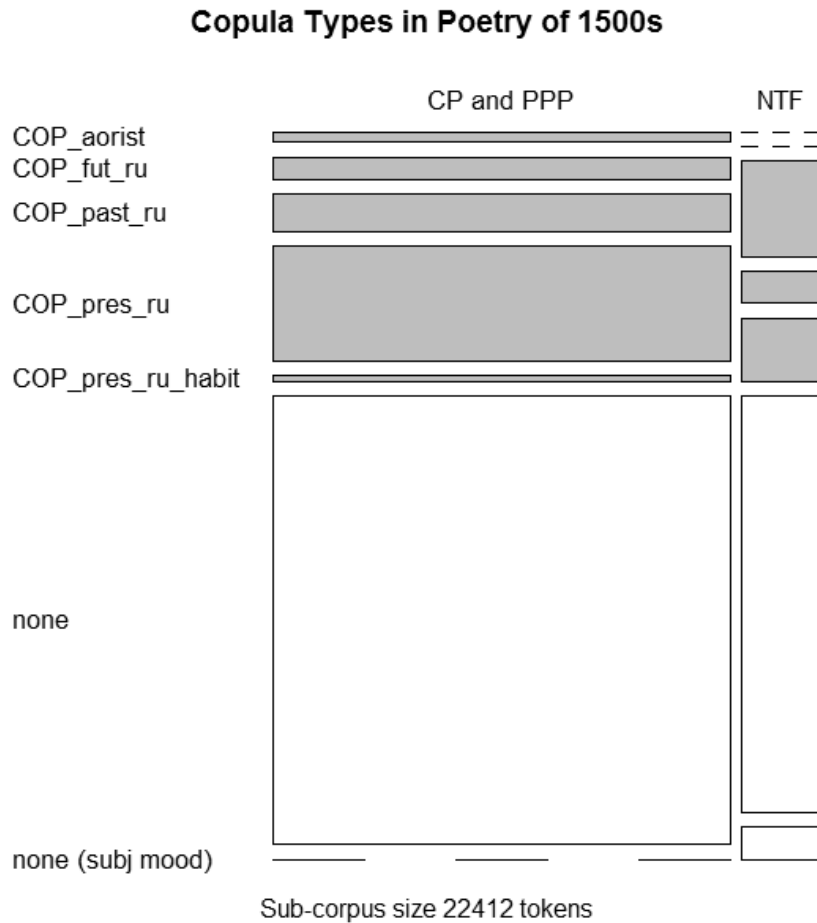
# Chart 6.1.8.a

## Distribution of Passivoid Phenomena in Poetry and Drama of 1500s, 1600s and 1700s



- 1.1 *Kyjevo-Mychajlivs'kyj collection* (16<sup>th</sup> c.), 8,354 tokens
- 1.2 *Zahorovs'kyj collection* (16<sup>th</sup> c.), 7,551 tokens
- 1.3 Pamvo Berynda's selected poetry (16<sup>th</sup> c.), 6,507 tokens
- 1.4 Historical poetry (17<sup>th</sup> c.), 10,424 tokens
- 1.5 The elegy *Na žalosnyj pohreb zacnoho rycera Petra Konaševyča Sahajdačnoho* by Kasijan Sakovyč (17<sup>th</sup> c.), 5,910 tokens
- 1.6 Selected poetry by Dymytrij Tuptalo (17<sup>th</sup> c.), 16,315 tokens
- 1.7 Selected poetry by Joanykij Haljatovs'kyj (17<sup>th</sup> c.), 1,471 tokens
- 1.8 Songs and poems by unknown authors (18<sup>th</sup> c.), 9,103 tokens
- 1.9 *Vertep* (18<sup>th</sup> c.), 6,404 tokens
- 1.10 *Oraciji* (18<sup>th</sup> c.), 6,705
- 1.11 *Komyčes'koje dijestvije* (1736) by M. Dovhalevs'kyj, 3,147 tokens
- 1.12 *Voskresenije mertvyh* (1746) by Heorhij Konys'kyj, 4,783 tokens
- 1.13 *Herojični stychy* (1784) by Ioann, 2,827 tokens

# Chart 6.1.8.b



The data frame consists of 137 observations of 2 variables. The independent factor “copula” has 7 levels. The table with data is below:

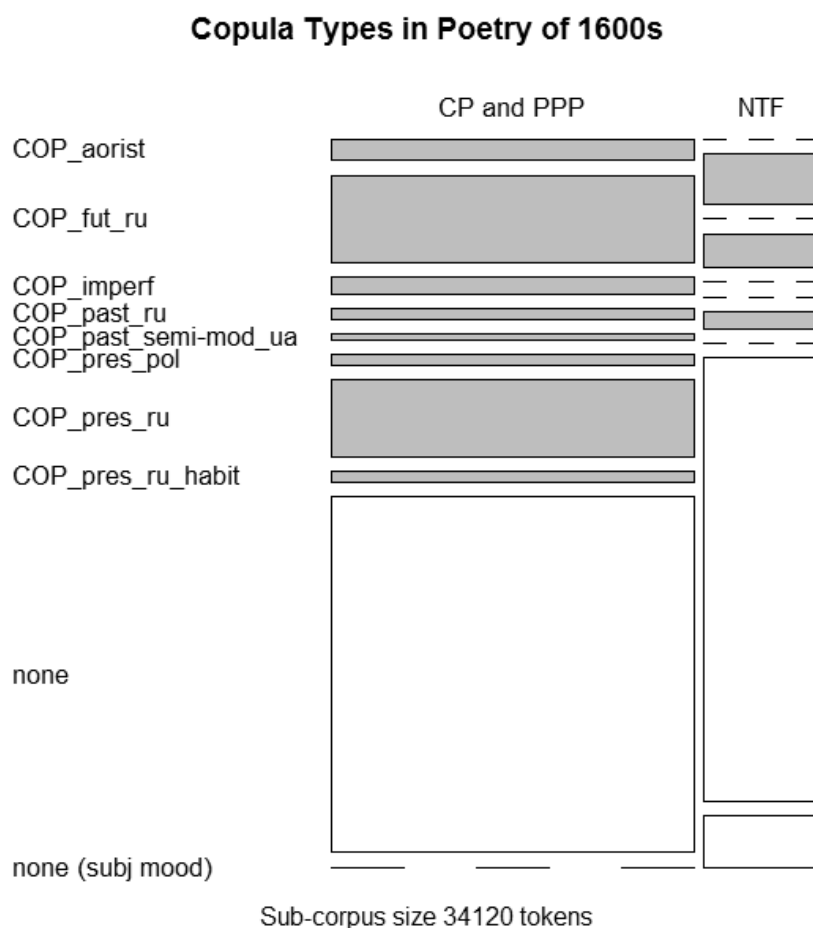
	COP_aorist	COP_fut_ru	COP_past_ru	COP_pres_ru	COP_pres_ru_habit
CP and PPP	2	4	7	21	1
NTF	0	0	3	1	2

	none	none (subj mood)
CP and PPP	82	0
NTF	14	1

X-squared = 17.149, df = 6, *p*-value = 0.008751; Fisher's *p*-value = 0.02428.

# Chart 6.1.8.c



The data frame has 144 observations of 2 variables. The independent factor “copula” has 10 levels. The table with data is below.

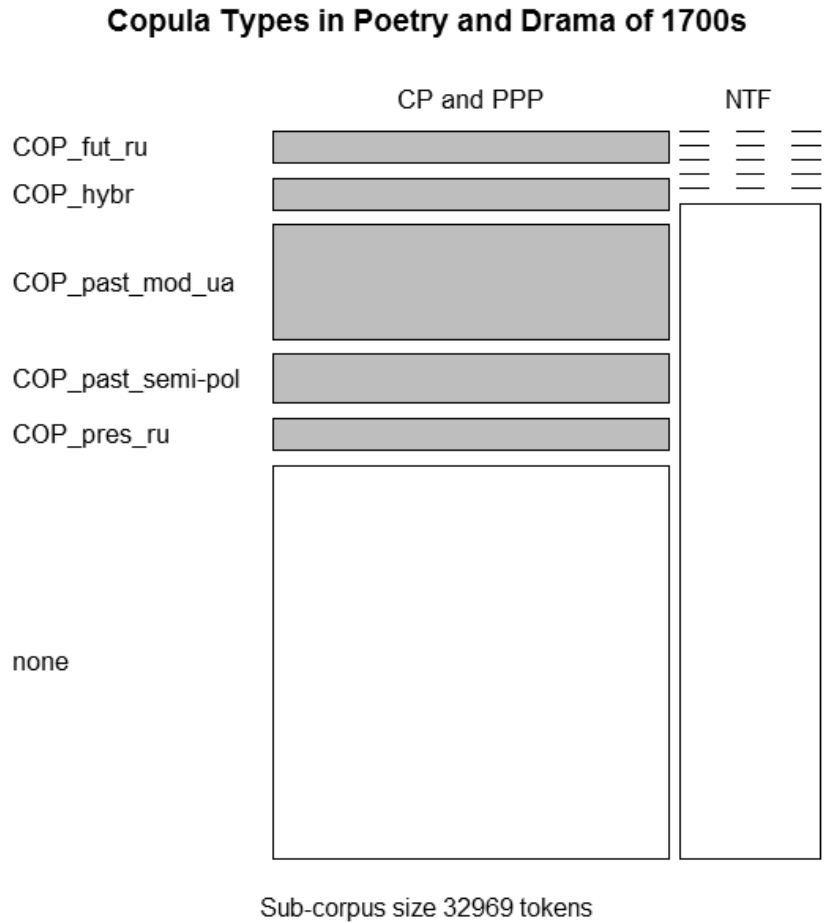
	COP_aorist	COP_fut_ru	COP_imperf	COP_past_ru	COP_past_semi-mod_ua
CP and PPP	4	16	3	2	1
NTF	0	3	0	2	0

	COP_pres_pol	COP_pres_ru	COP_pres_ru_habit	none	none (subj mood)
CP and PPP	2	14	2	65	0
NTF	0	1	0	26	3

X-squared = 18.8172, df = 9, *p*-value = 0.02679; Fisher's *p*-value = 0.04366.

**Chart 6.1.8.d**

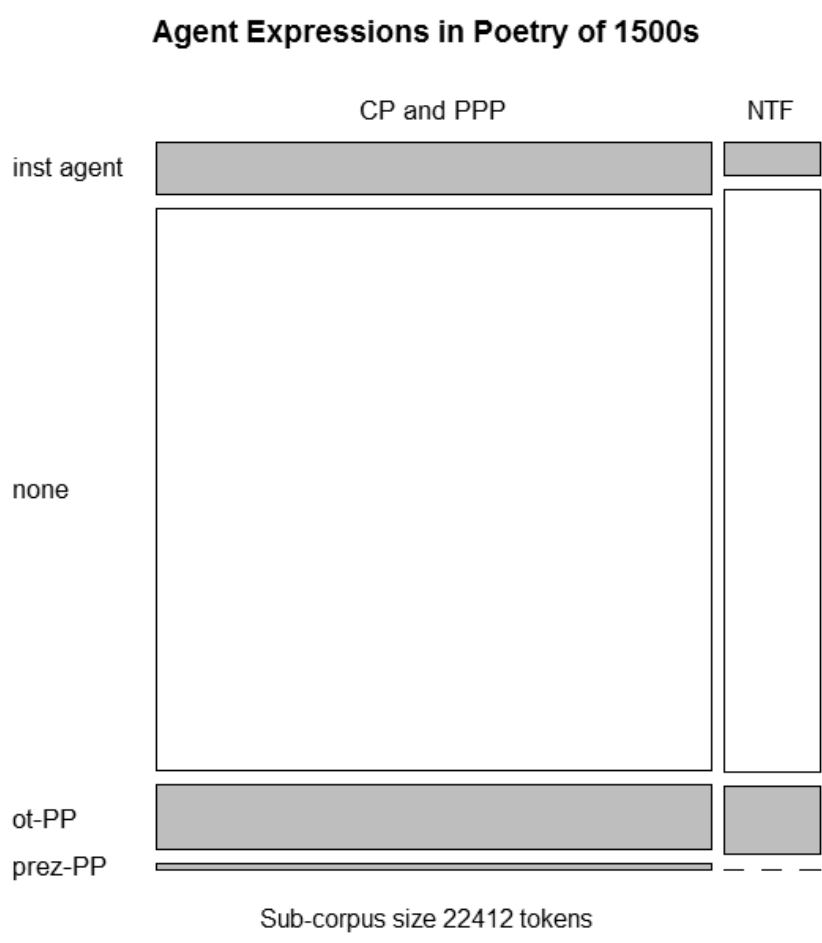


The data frame consists of 54 observations of 2 variables. The independent factor has 6 levels, cf. the table below:

	COP_fut_ru	COP_hybr	COP_past_mod_ua	COP_past_semi-pol	COP_pres_ru	none
CP and PPP	2	7	3	2	38	
NTF	0	0	0	0	0	0

X-squared = 7.9579, df = 5,  $p$ -value = 0.1586; Fisher's  $p$ -value = 0.2249.

Chart 6.1.8.e



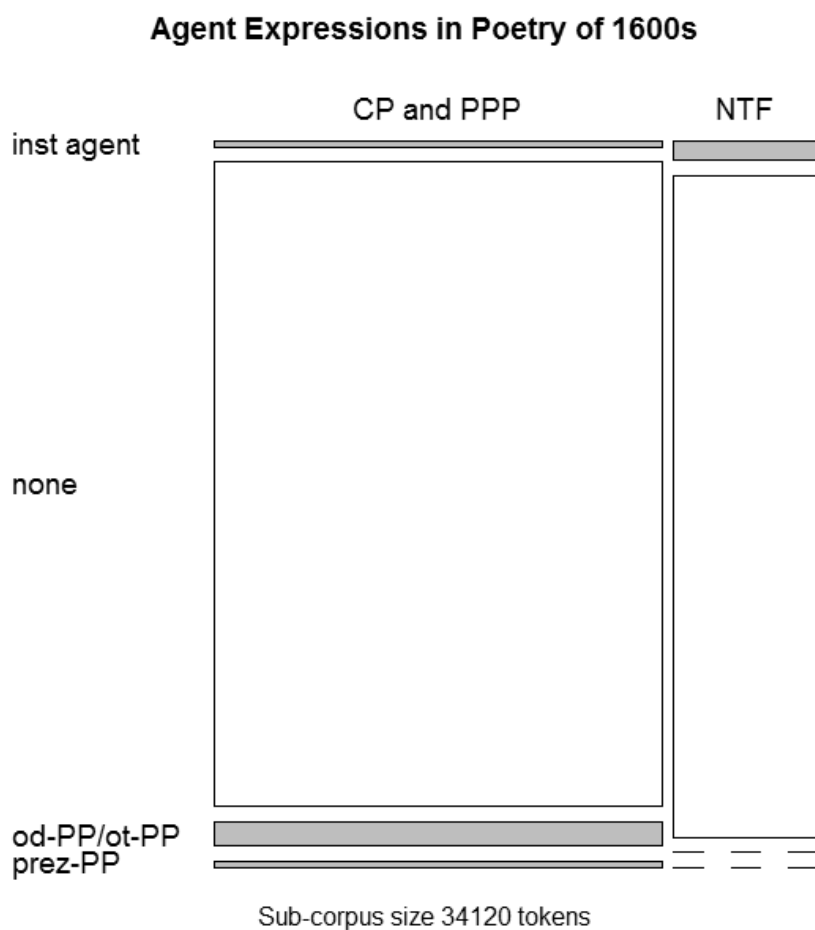
The data frame consists of 137 observations of 2 variables. The independent factor has 4 levels, cf. the table below:

	inst agent	none	ot-PP	prez-PP
CP and PPP	96	11	1	
NTF	1	17	2	0

X-squared = 0.365, df = 3, *p*-value = 0.9474; Fisher's *p*-value = 1.



# Chart 6.1.8.f

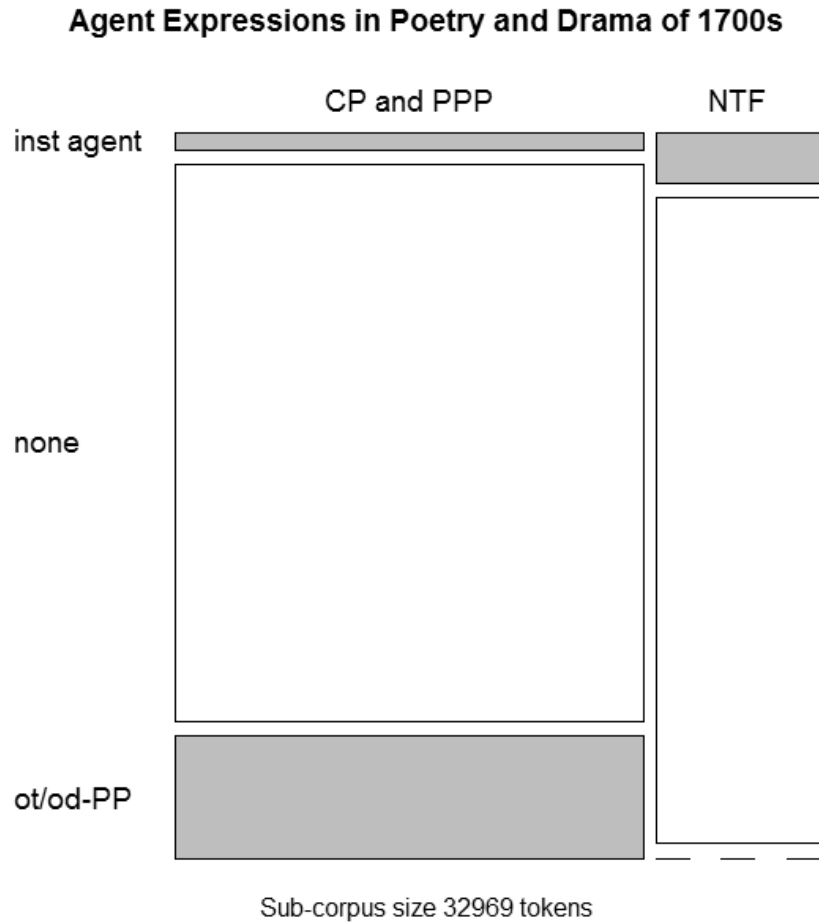


The data frame consists of 144 observations of 2 variables. The independent variable as 4 levels, cf. the table below:

	inst agent	none	od/ot-PP	prez-PP
CP and PPP	103	4	1	
NTF	1	34	0	0

X-squared = 2.3427, df = 3, *p*-value = 0.5044; Fisher's *p*-value = 0.5595.

**Chart 6.1.8.g**

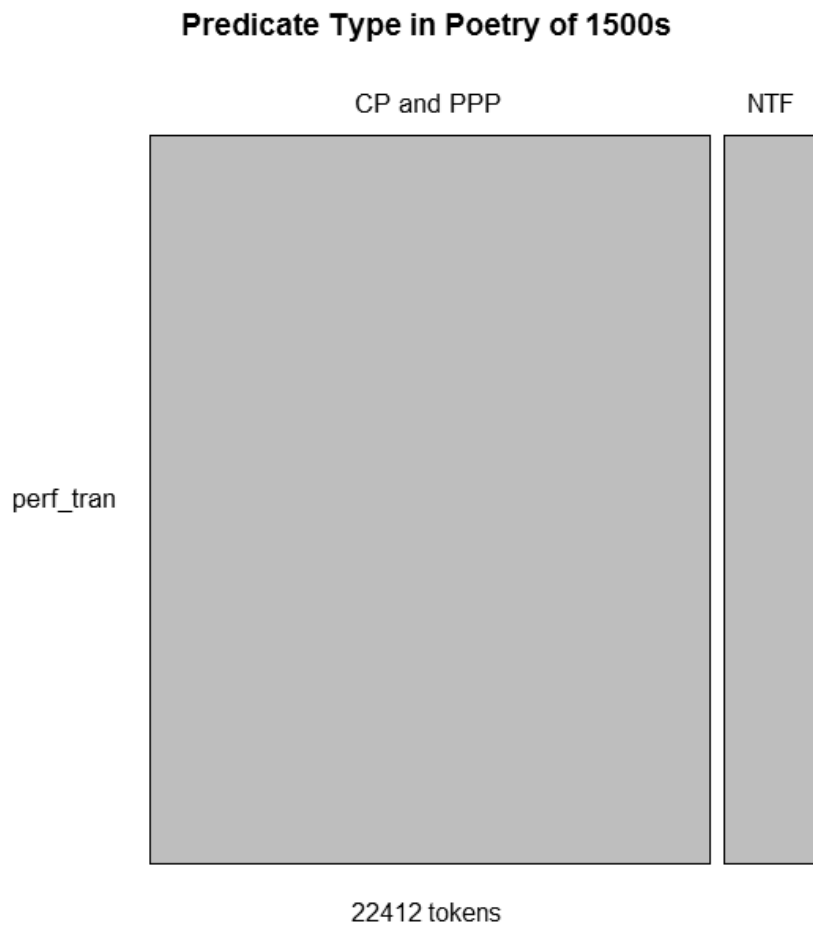


The data frame consists of 54 observations of 2 variables. The independent factor has 3 levels, cf. the table below:

	inst agent	none	ot/od-PP
CP and PPP	1	32	7
NTF	1	13	0

X-squared = 3.2593, df = 2,  $p$ -value = 0.196; Fisher's  $p$ -value = 0.1713.

## Chart 6.1.8.h

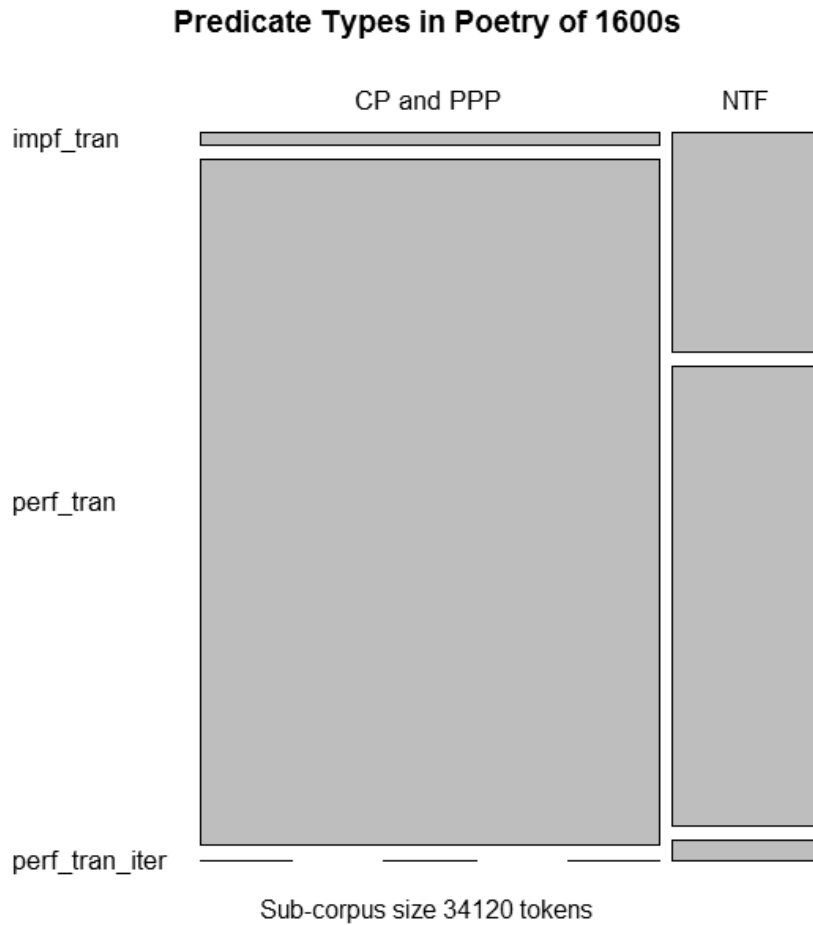


The data frame consists of 137 observations of 2 variables. The independent factor has 1 level, cf. the table below:

	perf_tran
CP and PPP	117
NTF	20

X-squared = 68.679, df = 1,  $p$ -value < 2.2e-16.

**Chart 6.1.8.i**

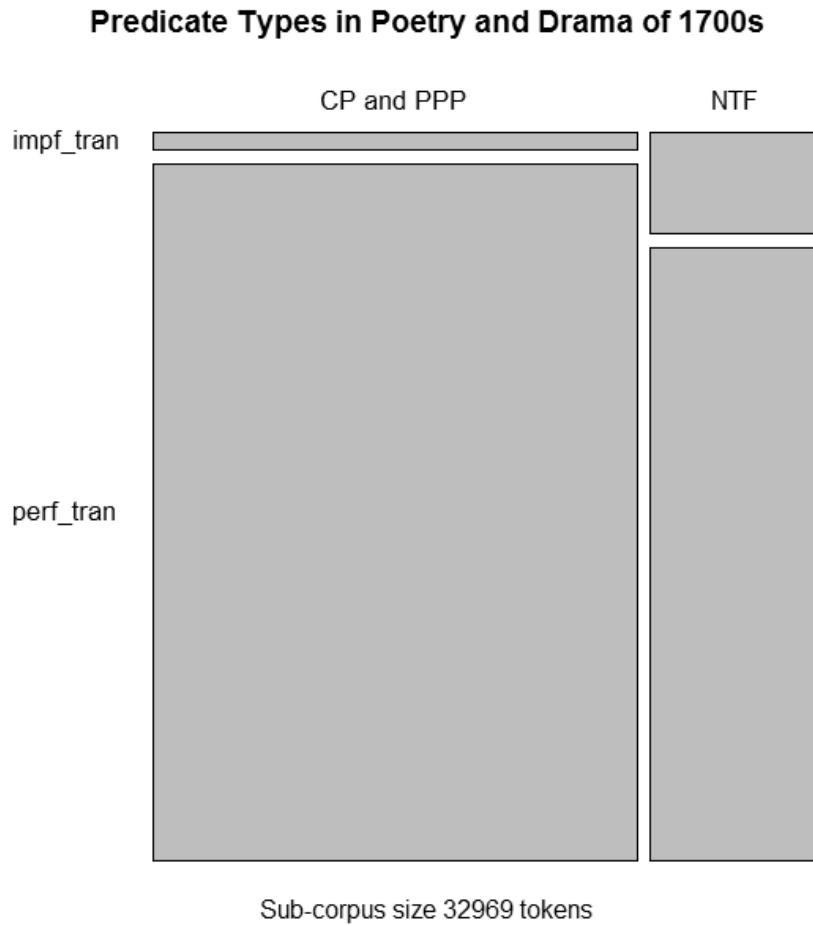


The data frame consists of 144 observations of 2 variables. The independent factor has 3 levels, cf. the table below:

	impf_tran	perf_tran	perf_tran_iter
CP and PPP	2107	0	
NTF	11	23	1

X-squared = 31.9056, df = 2,  $p$ -value = 1.18e-07; Fisher's  $p$ -value = 5.155e-07.

**Chart 6.1.8.j**

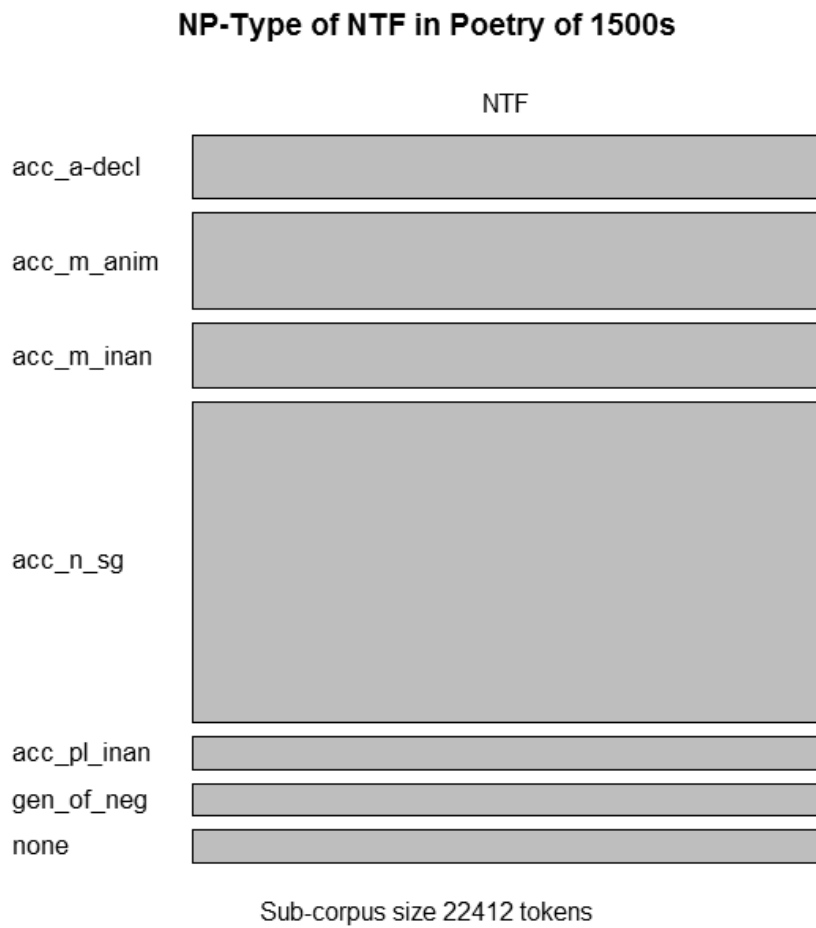


The data frame consists of 54 observations of 2 variables. The independent factor has 2 levels, cf. the table below:

	impf_tran	perf_tran
CP and PPP	1	39
NTF	2	12

X-squared = 0.9586, df = 1,  $p$ -value = 0.3275; Fisher's  $p$ -value = 0.1614

# Chart 6.1.8.k

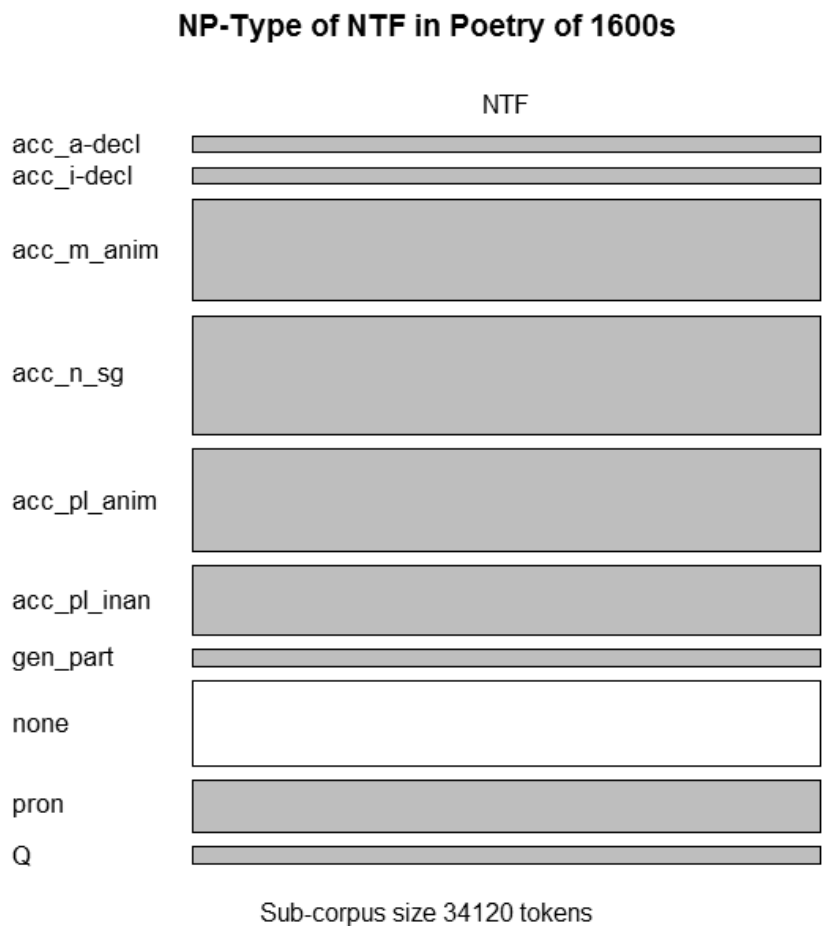


The data frame consists of 20 observations and 2 variables. The independent factor “NP” has 7 levels, cf. the table below:

	acc_a-decl	acc_m_anim	acc_m_inan	acc_n_sg
NTF2	3	2	10	
	acc_pl_inan	gen_of_neg	none	
NTF1	1	1		

X-squared = 22, df = 6, *p*-value = 0.001211.

Chart 6.1.8.1

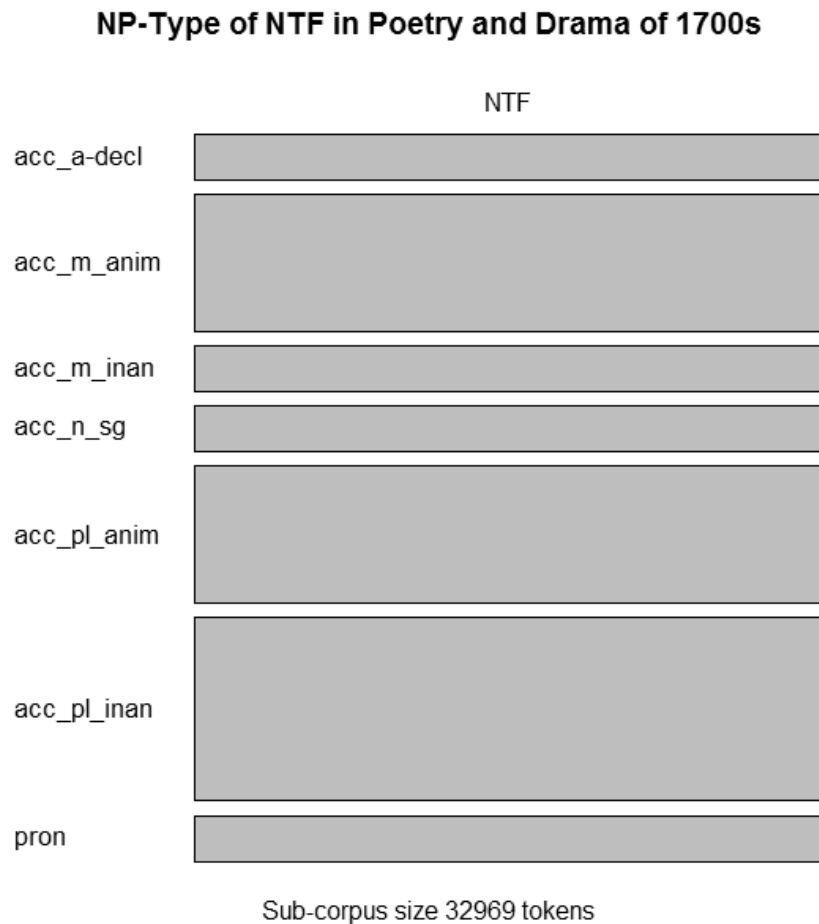


The data frame consists of 35 observations and 2 variables. The independent factor “NP” has 10 levels, cf. the table below:

	acc_a-decl	acc_i-decl	acc_m_anim	acc_n_sg	
NTF1	1	6	7		
	acc_pl_anim	acc_pl_inan	gen_part	none	pron
NTF6	4	1	5	3	1
	Q				

X-squared = 15, df = 9, *p*-value = 0.09094.

**Chart 6.1.8.m**



The data frame consists of 14 observations and 2 variables. The independent factor “NP” has 7 levels, cf. the table below:

	acc_a-decl	acc_m_anim	acc_m_inan	acc_n_sg
NTF1		3	1	1
	acc_pl_anim	acc_pl_inan	pron	
NTF3		4	1	

X-squared = 5, df = 6, *p*-value = 0.5438.



# Regression Analysis 6.1.8.k

## Poetry of 1500s

### Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Copula:Agent)

The significance level is set to 0,05, that is  $p$ -value  $< 0,05$  is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	137	LR chi2	8.36	R2	0.105	C	0.619
NTF	20	d.f.	4	g	1.333	Dxy	0.237
PPP and CP	117	Pr(> chi2)	0.0792	gr	3.793	gamma	0.346
max	deriv  0.002			gp	0.066	tau-a	0.060
				Brier	0.116		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	2.0140	0.3200	6.29	<0.0001
Copula	-0.2822	0.1847	-1.53	0.1266
Subjunctive_mood	-13.1073	256.3831	-0.05	0.9592
Agent	-0.3027	0.4134	-0.73	0.4641
Copula * Agent	4.7340	19.6281	0.24	0.8094

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 11.235, df = 5,  $p$ -value = 0.04691; Fisher's  $p$ -value = 0.07716.

Subjunctive\_mood: X-squared = 1.0126, df = 1,  $p$ -value = 0.3143; Fisher's  $p$ -value = 0.146.

Agent: X-squared = 0.365, df = 3,  $p$ -value = 0.9474; Fisher's  $p$ -value = 1.

COMMENT: High  $p$ -value in the Model Likelihood Ratio Test indicates that the logistic regression model does not fit the data well, which might be due to the small size of this data size. The predictions that can be made within this model are moderately precise, since the R<sup>2</sup> and Dxy indexes are rather low. The values of the index C however indicates a moderately good predictability of the dependent variable "NTF\_or\_PPP" via the independent variables "Copula", "Agent", and "Subjunctive\_mood". The  $p$ -value for all the Factors are not small enough to reject the null hypothesis. The interaction between factors "Copula" and "Agent" cannot be considered significant, since its  $p$ -value is very large. The  $p$ -values in normality tests are slightly different from those within the model.

# Regression Analysis 6.1.8.1

## Poetry of 1600s

### Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Predicate\_type + Subjunctive\_mood:Predicate\_type + Agent:Predicate\_type

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood Ratio Test		Discrimination Indexes		Rank Discrim. Indexes	
Obs	144	LR chi2	43,69	R2	0,39	C	0,78
NTF	35	d.f.	7	G	2,54	Dxy	0,56
PPP and CP	109	Pr(> chi2)	<0.0001	gr	12,64	gamma	0,77
max	deriv  8e-04			gp	0,2	tau-a	0,21
				Brier	0,13		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	1.2624	0.2666	4.73	<0.0001
Copula	0.3992	0.2219	1.80	0.0721
Subjunctive_mood	-11.3194	107.9845	-0.10	0.9165
Agent	7.1891	34.2075	0.21	0.8335
Predicate_type	-3.5190	1.1905	-2.96	0.0031
Copula * Predicate_type	0.2266	0.5650	0.40	0.6884
Subjunctive_mood * Predicate_type	3.5190	187.0378	0.02	0.9850
Agent * Predicate_type	-11.0893	83.6706	-0.13	0.8946

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 10.763, df = 8,  $p$ -value = 0.2155; Fisher's  $p$ -value = 0.27.

Subjunctive\_mood: X-squared = 5.8024, df = 1,  $p$ -value = 0.016; Fisher's  $p$ -value = 0.01343.

Agent: X-squared = 2.3427, df = 3,  $p$ -value = 0.5044; Fisher's  $p$ -value = 0.5595.

Predicate\_type: X-squared = 31.906, df = 2,  $p$ -value = 1.18e-07; Fisher's  $p$ -value = 5.155e-07.

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test indicates that the logistic regression model fits the data well. The values of the indexes C and Dxy indicate a good predictability of the dependent variable "NTF\_or\_PPP" via the independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood", while R<sup>2</sup> indicates the model's moderate ability to explain the variability of the data. The  $p$ -value of the factor "Predicate\_type" leads to the rejection of the null hypothesis, while the remaining factors support the null hypothesis. The interaction between factors cannot be described as significant, since their  $p$ -values are approaching 1. The  $p$ -values in normality tests do not coincide with the  $p$ -values inside the model, which is especially true in case of „Subjunctive\_mood“ factor. Its influence is, hence, significant, but cannot be described with the logistic regression model.

### Regression Analysis 6.1.8.m Poetry and Drama of 1700s Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Agent + Predicate\_type + Copula:Agent)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood Ratio Test		Discrimination Indexes		Rank Discrim. Indexes	
Obs	54	LR chi2	13.87	R2	0.332	C	0.779
NTF	14	d.f.	4	g	8.373	Dxy	0.559
PPP and CP	40	Pr(> chi2)	0.0077	gr	4328.414	gamma	0.822
max	deriv  0.002			gp	0.206	tau-a	0.219
				Brier	0.154		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	0.4865	0.3924	1.24	0.2151
Copula	7.8613	24.5566	0.32	0.7489
Agent	0.6654	0.7593	0.88	0.3809
Predicate_type	-1.1796	1.2861	-0.92	0.3590
Copula * Agent	-5.5148	54.4159	-0.10	0.9193

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 7.9579, df = 5,  $p$ -value = 0.1586; Fisher's  $p$ -value = 0.2249.

Predicate\_type: X-squared = 0.95861, df = 1,  $p$ -value = 0.3275; Fisher's  $p$ -value = 0.1614.

Agent: X-squared = 3.2593, df = 2,  $p$ -value = 0.196; Fisher's  $p$ -value = 0.1713.

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test indicates that the logistic regression model fits the data well. The values of the indexes C and Dxy indicate a good predictability of the dependent variable “NTF\_or\_PPP” via the independent variables “Copula”, “Agent” and “Predicate\_type”, while the coefficient  $R^2$  indicates the model's poor fitting capacity and ability to explain the variability of the data. None of the Factors, or their interactions, can be considered as significant, because of their overall high value. The  $p$ -values in normality tests correspond, with slight deviations, to their cognate  $p$ -values inside the model.

## 6.2. Summary

The investigation of literary texts has revealed that the morphological accusative is usually absent from those texts that have been heavily influenced by Church Slavonic patterns. In Ruthenian chronicles NTF has been frequently attested with past ru copula. NTF has also been attested with aorist, future, past pol, past ru and pres ru copula types. In the majority of the records, the complementizers *aby*, *žeby*, etc. trigger the tense marking auxiliaries – usually the past ru copula – into the structure of NTF. The overwhelming majority of agents in Ruthenian chronicles is expressed with ot/od-PP. Still, there are several records of čerez-PP and prez-PP in the structure of both CP and NTF. The overwhelming majority of NTF and CP/PPP are formed from perfective transitive verb stems. The imperfective transitive and iterative stems are more frequent in NTF than in CP/PPP.

Since the core narration mode in Cossack Writings is participial (copula-less) passive, tense marking auxiliaries are not frequent in this sub-set. NTF records are predominantly copula-free in this sub-set of texts. Even so, there is a high degree of variation attested within the domain of tense marking auxiliaries in Cossack Writings. Namely, CP has been attested with fut, imperf, past mod ua, past pol, past ru, past semi-pol, pres pol and pres ru copula types. The most frequent copula type in both CP and NTF is past ru copula. The presence of complementizers does not usually trigger the appearance of tense marking auxiliaries in NTF. CP/PPP and NTF co-occur with čerez-PP, inst agent and ot-PP, the latter being by far more numerous in this sub-set. Formation from perfective transitive verb stems by far outnumbers the formation from other stem types in both CP/PPP and NTF. Iterative and imperfective verb stems are more frequent in NTF than in CP/PPP.

The narration mode in the 18<sup>th</sup> c. Diaries and Memoirs is clearly participial passive, followed by NTF without any overt copula. CP and NTF have been infrequently attested with past ru copula, fut copula, pres pol copula and imperf<sup>118</sup> copula. The complementizers like *aby*, *žeby*, and *daby* do not trigger any tense marking auxiliaries into the structure of NTF in this sub-set. On the whole, Agent Expressions are rare in Diaries and Memoirs. However, CP and PPP infrequently co-occur with čerez-PP, inst agent, prez-PP and ot-PP, the latter being the most productive one. NTF has only been attested with inst agent and ot-PP. Almost all CP/PPP and NTF records are formed from perfective transitive verbal stems. There are very few records formed from imperfective or/and iterative verbal stems.

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<sup>118</sup>Both imperfect and aorist used in 18<sup>th</sup> c. represent stylistic embellishment used to emphasize the significance of the subject matter.

The core construction type in late 16<sup>th</sup> – early 17<sup>th</sup> c. Semi-Secular Religious Polemics is CP, that has been attested with aorist, fut ru, past mod ua, past ru and pres ru copulas. NTF has been attested with 3 copula types: fut ru, past ru and pres ru. The most productive copula type in both CP/PPP and NTF is pres ru copula followed by past and fut ru copulas respectively. Other copula types represent a marginal phenomenon in this sub-set. The most productive Agent Expression in both CP/PPP and NTF is ot-PP, remotely followed by prez-PP. CP/PPP has also been attested with čerez-PP. The complementizers *aby*, *žeby*, etc do not trigger the tense marking auxiliaries into the structure of NTF in this sub-set. The majority of CP/PPP and NTF records is formed from perfective transitive verbal stems. NTF has also been frequently formed from imperfective transitive and perfective transitive iterative verbal stems.

In Local and Monastery Chronicles of early 1600s – late 1700s CP has been most frequently attested with past ru copula, less frequently with aorist and pres ru copula. Infrequently CP has also been attested with fut ru, imperf, past mod ua, past pol and past semi-mod ua copulas. NTF in this sub-set predominantly occurs without any tense marking auxiliaries: there are few records of aorist, fut ru and past ru copula in the structure of NTF. In contrast to the previous sub-set, complementizers might or might not trigger tense marking auxiliaries into the structure of NTF. CP frequently co-occurs with ot-PP, less frequently with inst agent. There are also several prez-PP and čerez-PP in the structure of CP. NTF co-occurs with ot-PP and inst agent. The overwhelming majority of CP and NTF records are formed from perfective transitive verb stems, and considerably less frequently from imperfective transitive verbs. Besides, NTF has also been formed from iterative verb stems.

In Entertaining Fiction of 1500s and 1600s the most productive copula type in CP construction is past mod ua copula, followed by pres ru copula. Less frequent copula types in CP are aorist, past pol, past ru, past semi-mod ua and pres pol copulas. Copulas have been rarely attested in the structure of NTF in this sub-set. The most productive copula type in NTF is fut ru copula, followed by past ru and past mod ua copula. Complementizers in this sub set do not trigger the appearance of tense marking auxiliaries in the structure of NTF. The most productive Agent Expression in both CP/PPP and NTF is od-PP. CP/PPP also (seldom) co-occurs with inst agent and prez-PP in this sub-set. Whereas both CP and NTF records are formed from either perfective transitives or imperfective transitives, there are also numerous NTF records formed from perfective transitive iterative and imperfective transitive iterative verb stems.

In Pilgrimage reports, in the spiritual Testament and Vitas of 1500s and 1600s, the

most productive copula type in CP is past ru, followed by pres ru, past semi-mod ua and past mod ua copulas. CP in this sub-set has also been attested with aorist and fut ru copulas. The most productive copula type in NTF are pres ru and past ru copula, followed by past mod ua, fut ru and past semi-mod ua copulas. In majority of cases, complementizers like *by*, *aby*, *ižby*, etc trigger the appearance of copula in the structure of NTF. CP has frequently been attested with od-PP, and considerably less frequently with čerez-PP and inst agent. Several inst agent and od-PP have been attested in the structure of NTF as well. In this sub-set both CP and NTF are predominantly formed from perfective transitive verbs, and occasionally from imperfective transitive or perfective transitive iterative verbal stems.

In Poetry of 1500s CP is frequently attested with pres ru and pres ru habitative copulas, as well as with past ru copula; less frequently CP has been attested with aorist and fut ru copula. NTF is most frequent with past ru copula, followed by pres ru and pres ru habitative copulas. In poetry of 1600s NTF has been attested with fut ru, pres ru and past ru copula. Complementizers in NTF records of both 1500s and 1600s never trigger tense marking auxiliaries into the structure of NTF. CP of 1600s occurs predominantly with fut ru and pres ru copulas; there are also several records of aorist, imperf, past semi-mod ua, pres pol and pres ru habitative copulas. In poetry and drama of 1700s, NTF has never been attested with any tense marking auxiliaries. CP is most frequent with past mod ua copulas; it also occurs with fut ru, past semi-pol and pres ru copulas. Besides, there are several records of the contracted (shortened) hybrid copulas in the structure of CP.

Agent Expressions in Poetry of 1500s are encountered predominantly in the shape of inst agent, as well as ot-PP, in both CP and NTF. In Poetry of 1600s NTF co-occurs with inst agent, while CP/PPP co-occurs with both inst agent and od/ot-PP. There are rare cases of prez-PP in the structure of CP in Poetry of 1500s and 1600s. NTF in Poetry and Drama of 1700s is attested exclusively with inst agent, while CP/PPP records are attested with both inst agent and od/ot-PP, the latter one being more frequent. In poetry of 1500s both CP/PP and NTF records are formed exclusively from perfective transitive verbs. NTF records in Poetry of 1600s are frequently formed from imperfective transitive verbs, and, less frequently from perfective transitive iterative verbal stems. In poetry of 1700s the core predicate type is perfective transitive. NTF however has also been frequently attested with imperfective transitive stems.

### 6.3. Middle Ukrainian administrative texts: court files and legal documents<sup>119</sup>

This large sub-corpus of texts consists of trial records and town administration documents from different areas of today's Ukraine. *Akty Poltavs'koho polkovoho sudu 1668-1740* are legal documents issued by Poltava Regimental tribunal, one of ten administrative units of the Cossack State Hetmanate, a state that existed on the territory of Dnieper Ukraine, the heartland of today's Central Ukraine from 1649 till 1764. The Hetmanate emerged in the result of Chmel'nyc'kyj's uprising of 1648-1657. The regiment's capital was the town of Poltava in Central Ukraine, located on the left bank of the river Dnieper. The Poltava Regiment was officially abolished in 1775, and its territory was integrated into Little Russia as an imperial administrative unit, or Governorate. The dialect of the Poltava region emerged in the 16<sup>th</sup> c. and was vastly employed in the formation of the standard literary Ukrainian in the 19<sup>th</sup> and 20<sup>th</sup> c.

*Akty Žytomyrs'koho hrods'koho urjadu 1590-1635* are legal documents issued by the Žytomyr town administration. Žytomyr is a town in the North-West of today's Ukraine that was annexed by the Lithuanian Principality in early 14<sup>th</sup> c., and belonged to the Polish Crown from 1569 till 1793. This language variety bears several features typical of North Ukrainian (Mojsijenko 2004, 7).

*Luc'ka zamkova knyha 1560-1561*. This administrative book of official documents stems from Volynia region, that at the time of its compilation belonged to the Grand Duchy of Lithuania. Earlier Volynia was part of the Halyč-Volynia principality, one of Kievan Rus' successor states. Its dialect is believed to be the closest counterpart of the language variety spoken in Kievan Rus'.

#### 6.3.1. Trial records of the Poltava regimental court (1668-1740)<sup>120</sup>

The NTF (102) in these trial records clearly are as frequent as PPP and CP (105). This vast body of administrative texts offers only 5 records of NTF with morphological accusative, all of which occur without any tense marking auxiliaries in the structure, i.e. *i ro(s)kyneno<NTF> tuju pčolu<ACC\_a-decl>; jak" položono<NTF> hranicu<ACC\_a-decl>; ta(m) i pryznaku<ACC\_a-decl> položeno<NTF>; korovu<ACC\_a-decl> v nei w(t) parachyja(l)no(h)o prezvytera v("")zjato<NTF>; na ych" černeckoj hreblě podnjato<NTF> vodu<ACC\_a-decl>*. Otherwise there is mask anim noun in the NP

<sup>119</sup>These administrative texts kindly provided by the Ukrainian Academy of Sciences (P.Ju. Hrycenko, V.M. Mojsijenko, U.M. Štandenko): *Akty Poltavs'koho polkovoho sudu 1668-1740* [352,679 tokens]; *Akty Žytomyrs'koho hrods'koho urjadu 1590-1635* [51,885 tokens]; *Luc'ka zamkova knyha 1560-1561*.

<sup>120</sup> These files were put down i.a. by scribes Roman Rozyns'kyj, Filon Horkuša, Daniel Wojcechovyč.

(15), e.g. *La(v)re(n)tija v holovu vdareno<NTF>; Wstapa Čale(n)ka darovano<NTF> ho(r)lo(m); Tut" že pytano<NTF> Herasyrna. NTF is also attested with personal pl pronoun NPs (4), e.g. darovano<NTF> nas"<ACC/GEN\_pl\_anim> karno(s)tju sme(r)te(l)noju; hde i čere(z) Dněpr" nas"<ACC/GEN\_pl\_anim> perevezeno<NTF>; jak" nas"<ACC/GEN\_pl\_anim> zavoženo<NTF> za to(j) krun"t" lěsnyj; i(ž) pe(r)son" zna(č)ny(ch)<ACC/GEN\_pl\_anim> vyslano<NTF>. Besides NTF occurs with mask inan in the NP (5), e.g. i za(v)datok"<ACC/NOM\_m\_inan> ve(r)nenno<NTF>; i skryn" podvyšeno<NTF> značne; with pl inan NP (7), e.g. jak" pryznaky značne kresty<ACC/NOM\_pl\_inan> položeno<NTF>; jak" ty(č)ky<ACC/NOM\_pl\_inan> položeno<NTF>; dovody<ACC/NOM\_pl\_inan> pokazano<NTF>. Most numerous however are the forms syncretic between nominative and accusative, like neuter noun/pronoun/numeral phrase NPs (70), e.g. Šacovano<NTF> toje vse<ACC/NOM\_pron> v pjatidesja(t) zoloty(ch); i sije kupčoje pismo<ACC/NOM\_n\_sg> o(t) mene dano<NTF>; na koto(r)j) kle(j)no<ACC/NOM\_n\_sg> položeno<NTF>.*

Such records of NTF with NPs syncretic between nominative and accusative are frequently attested with overt past ru copula in formulas of chancellery language bearing subjunctive meaning, especially of the following type, cf. *žeby<C> bylo<COP\_past\_ru> sije svědoctvo zapisano<NTF>; aby<C> toje bylo<COP\_past\_ru> i v poto(m)nyje časy zapisano<NTF>; i(ž) by<C> i toje pro pamja bylo<COP\_past\_ru> do kni(h) vpisano<NTF>; A žeby<C> toje i v(") časy poto(m)nyje ne bylo<COP\_past\_ru> někim" narušono<NTF>. Chancellery formulas with present and future ru copula are also frequent, e.g. hde tylko wnoje budet"<COP\_fut\_ru> pokazanno<NTF>; i hde onoje javleno<NTF> budet'<COP\_fut\_ru>; a tělo moje necha(j) budet"<COP\_fut\_ru> ze(m)leju prykryto<NTF>; ščo je(st)<COP\_pres\_ru> vrjado(v)ne obvarovano<NTF>.*

Save administrative formulas, NTF hardly ever occurs with overt copulas. Besides, few attested exx can also be instances of agreeing passives, e.g. *ōpuskaju je(j) vsju tuju spa(š) – proso, koto(r)je<ACC/NOM\_n\_sg> mně bylo<COP\_past\_ru> stovleno<NTF> za Vo(r)sklo(m); aby uboztv"<ACC/NOM\_n\_sg> moje vedluh" sei ostatnoi volě mojej bylo<COP\_past\_ru> rosporjaženo<NTF>, koto(r)je i rosporaženo<NTF> v to(t) sposob. NTF construction is attested with past ru copula (1) bearing the meaning of pluperfect, e.g. pro(š)ly(ch) lět", jak" pana Demo(č)ka postano(v)leno<NTF> bylo<COP\_past\_ru> po(l)ko(v)nyko(m), byli(s)mo v kor(")čmě v Loko(š)kovni.*

There are 44 agent expressions attested in this body of text: in the shape of inst agent (25) and in the form of ōt/ot/ōd/od(')-PP (19). As to the inst by-phrase on NTF, it is extremely rare (4). Besides, 3 out of 4 records can also be instances of agreeing passive, cf. *to<ACC/NOM\_pron> jemu vručeno<NTF> Vu(c)koju Zajačychoju staroju<INST>; hde by sja ščo(c)ko(lvek")<ACC/NOM\_pron> Ty(m)ko(m)<INST> pokazano<NTF> mně; A žeby toje<ACC/NOM\_pron> i v(") časy poto(m)nyje ne bylo někym"<INST> narušono<NTF>. The last ex has pl inan noun in the NP,*



e.g. *i ruchomyje někotoryje reči*<ACC/NOM\_pl\_inan> *krevny(m) nebožčici lekhovano*<NTF> *ōnoju (ž) Ma(r)tynychoju*<INST>. There are also 4 exx of ot-PP with the lexeme *dat'* „give“, all of them however might designate a source, e.g. *i sije kupčoje pysmo o(t) mene dano*<NTF> *v Poltavě*.

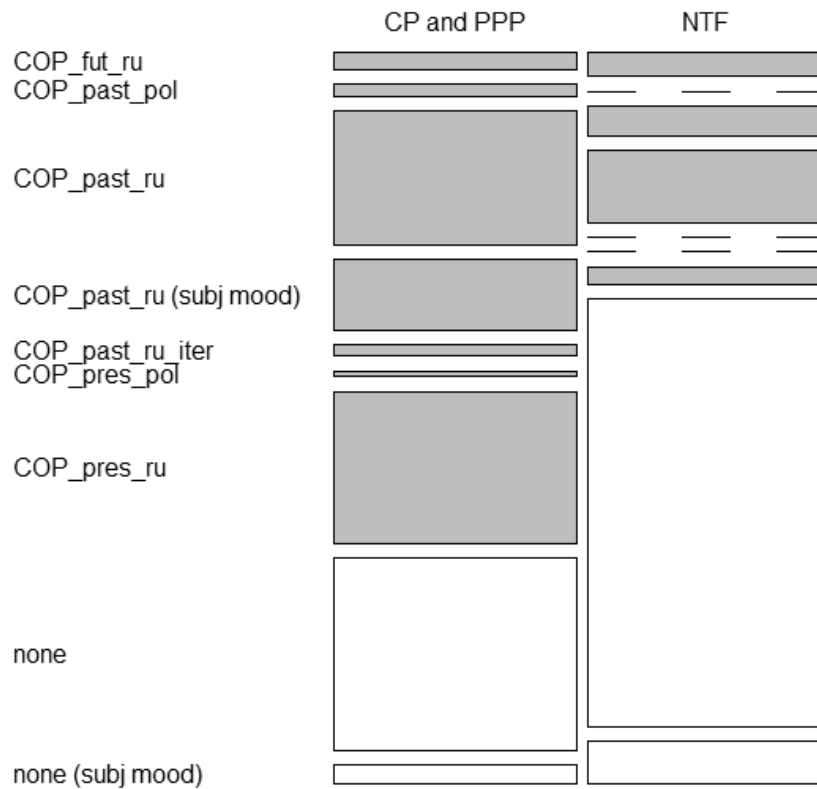
Agent expressions on passive participles are more numerous (40), e.g. *kr(s)t" položen" nami*<INST> *ново*; *Ahrypyna [...] ponjata zo(s)tala v(")torobra(č)ne v(") sta(n)" ma(l)ženski(j) Stepano(m) Sjaha(j)le(n)kom"*<INST>; *prezen"tovan" se(j) zapi(s) panom" Petrom" Kova(n)koju*<INST>; *aby taja i(ch) uhoda zostavala věčne pri moci, ni ō(t) ko(h)[o]*<ot-PP> *ne narušona*; *i(ž) by ō(t) prijatele(j)*<ot-PP> *Tube(l)čišyny(ch) chuto(r) te(n)" ne byl" pustošon*; *aby (m) ja ne byl" turbovan" o(t) potom"kov"*<ot-PP> *žony mojej Hani*.

The overwhelming majority of NTF records are formed from transitive perfective verbs. Altogether we have marked 652 perfective verb stems and 74 imperfective ones. All predicate types attested in these court files are formed from transitive verbs. We have not been able to detect any NTF or participles formed from intransitive verb stems. There are 2 records for participles formed from iterative transitive perfective verbs, cf. *Dlja dovo(d)něšo(h)[o] rozoznanja by(l) posilan"*<PPP\_pf\_iter> *z(") urjadu pan" Havrilo Barabaš"*. There are numerous records formed from imperfective verb stems (74), e.g. *i za(v)datok" ve(r)neno*<NTF\_impf>; *sě(m) bočok" šacovano*<NTF\_impf>; *žeby [...] ne vorošeno*<NTF\_impf> *koste(j) moich"*; *ljubja ne drano*<NTF\_impf>; *ulev" ne rubano*<NTF\_impf>; *jesly by što komu dano*<NTF\_impf>; *A khdy ono(h)[o] pre(d) na(s) pryvedeno*<NTF> *i pytano*<NTF\_impf>; *hde ščo komu lekhovano*<NTF\_impf>; *aby (m) ja ne byl" turbovan"*<PPP\_impf>; *i inšyje hodnyje ljude [...] sluchany*<PPP\_impf>; *i taja saha hačena*<PPP\_impf> *byvala*; *U(st)ne prošon*<PPP\_impf>; *i(ž) by [...] chuto(r) te(n)" ne byl" pustošon"*<PPP\_impf>.

We have found several records of disrupted subject-predicate agreement in the administrative formulas of these court files, where the argument is in agreement with its auxiliary, but not with the predicate, cf. *aby i(ch) prodaza*<NOM\_a-decl> *i kuplja*<NOM\_a-decl> *po(d)piso(m) ruki pisa(r)sko(i) i priti(s)nen(")jem" pečate(j) po(l)kovni(c)koje i mě(s)koje byla*<COP\_past\_ru\_f> *stve(r)ženo*<NTF> *v Po(l)tavě*.

# Chart 6.3.1.a

## Copula Types in Poltava trial records



This data frame contains 207 observations of 2 variables. The independent factor “copula” has 9 levels, cf. the table below:

	COP_past_pol	COP_past_ru	COP_past_ru (subj mood)	COP_past_ru_iter
CP and PPP	2	23	12	2
NTF	0	5	12	0

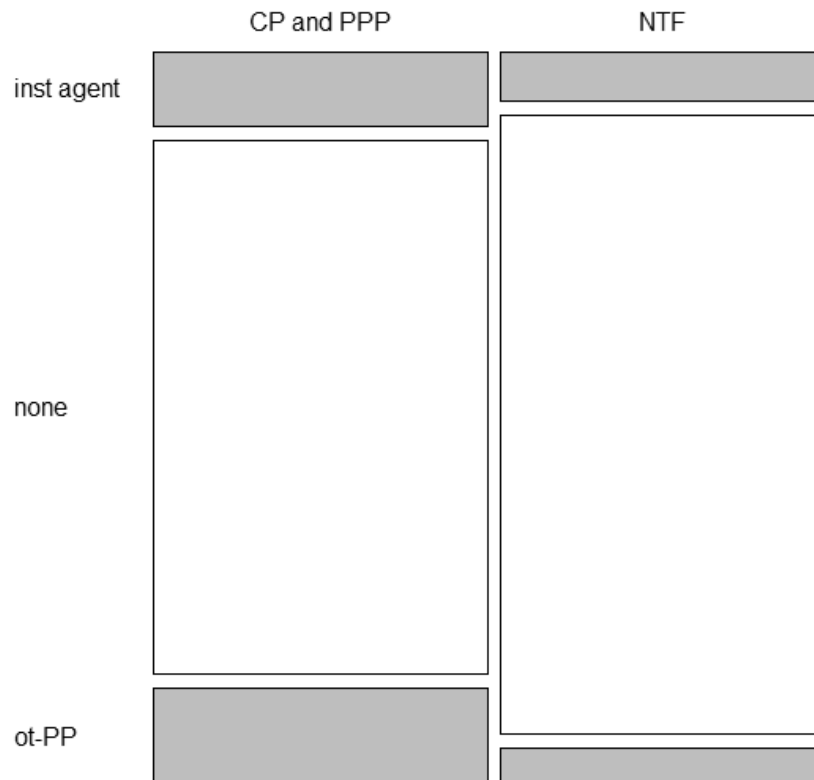
  

	COP_pres_pol	COP_pres_ru	none	none (subj mood)	COP_fut_ru
CP and PPP	1	26	33	3	3
NTF	0	3	71	7	4

X-squared = 50.4074, df = 8, *p*-value = 3.412e-08

# Chart 6.3.1.b

## Agent Expressions in Poltava trial records

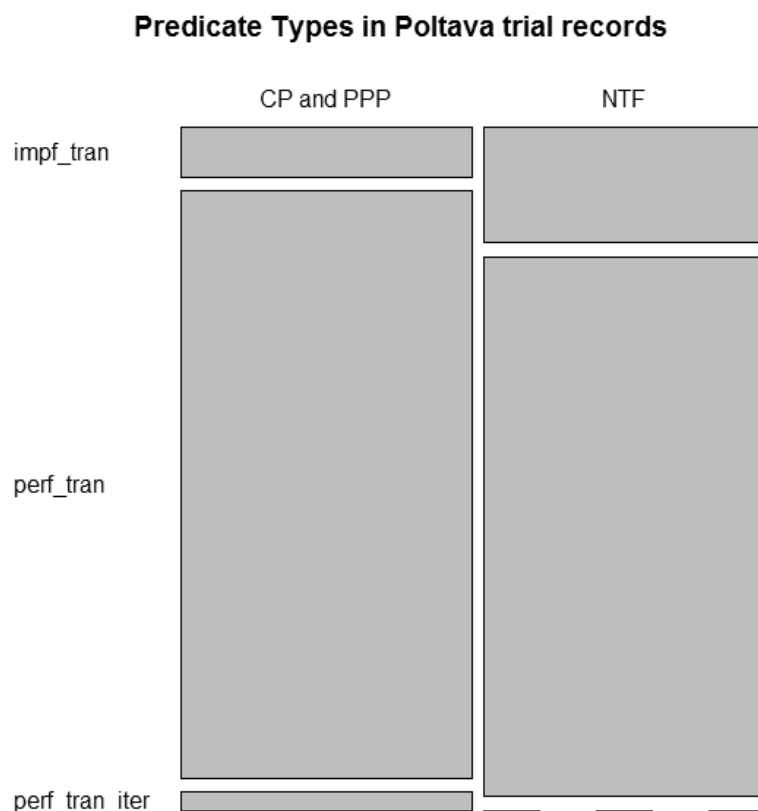


This data frame consists of 207 observations of 2 variables. The independent factor “agent” has 3 levels, cf. the table below:

	inst agent	none	ot-PP
CP and PPP	11	80	14
NTF	4	90	4

X-squared = 5.698, df = 2,  $p$ -value = 0.0579; Fisher's  $p$ -value = 0.05881.

# Chart 6.3.1.c

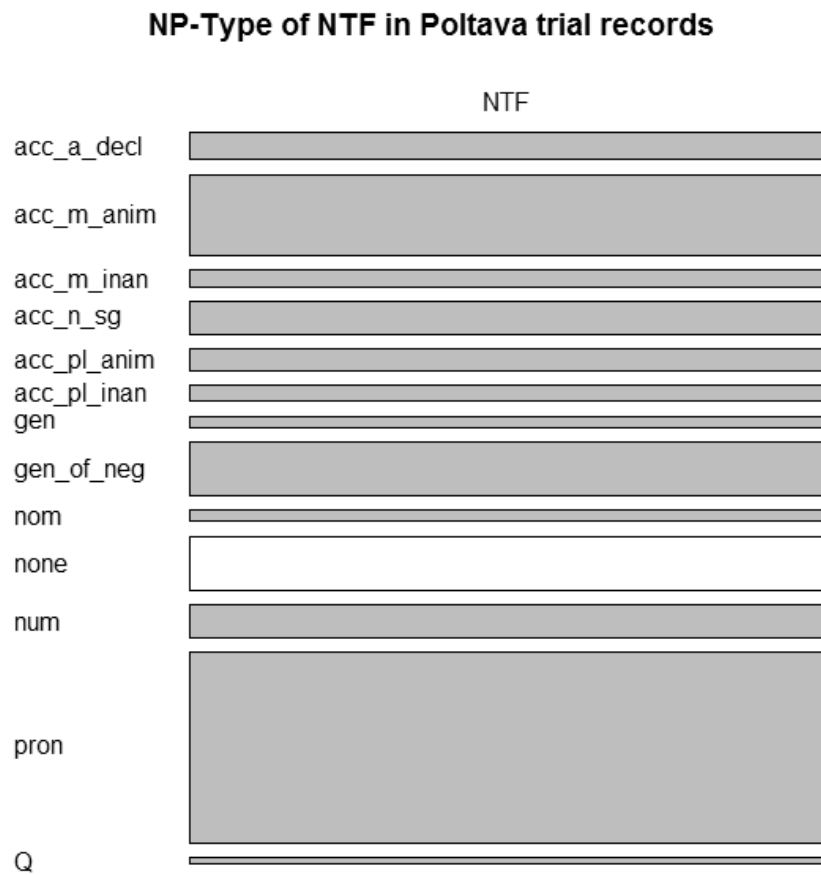


This data frame consists of 207 observations of 2 variables. The independent factor “predicate” has 3 levels, cf. the table below:

	impf_tran	perf_tran	perf_tran_iter
CP and PPP	8	94	3
NTF	18	84	0

X-squared = 7.366, df = 2, *p*-value = 0.02515; Fisher's *p*-value = 0.01999.

**Chart 6.3.1.d**



The data frame of this sub-corpus consists of 102 observations of 2 variables. The independent factor “NP” has 13 levels, cf. the table below:

	acc_a-decl	acc_m_anim	acc_m_inan	acc_n_sg								
NTF	5	15	3	6								
					acc_pl_anim	acc_pl_inan	gen	gen_of_neg	nom	none	num	pron
NTF					4	3	2	10	2	10	6	35
												1
												Q

X-squared = 126.14, df = 12,  $p$ -value < 2.2e-16.

# Regression Analysis 6.3.1.e

## Poltava trial records

### Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Subjunctive\_mood + Copula:Agent + Copula:Predicate\_type +  
Subjunctive\_mood:Agent + Subjunctive\_mood:Predicate\_type + Agent:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	207	LR chi2	56,92	R2	0,32	C	0,78
NTF	102	d.f.	10	g	7,13	Dxy	0,57
PPP and CP	105	Pr(> chi2)	<0.0001	gr	1246,25	gamma	0,64
max	deriv			gp	0,25	tau-a	0,28
	0.001			Brier	0,19		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	-0.3769	0.2301	-1.64	0.1014
Copula	0.5896	0.1933	3.05	0.0023
Subjunctive_mood	-1.3367	1.1258	-1.19	0.2351
Agent	0.1378	0.3405	0.40	0.6857
Predicate_type	-1.2971	0.6699	-1.94	0.0528
Copula * Subjunctive_mood	-0.1049	0.4413	-0.24	0.8121
Copula * Agent	7.4407	34.7781	0.21	0.8306
Copula * Predicate_type	6.9610	64.4693	0.11	0.9140
Subjunctive_mood * Agent	-21.8815	104.3368	-0.21	0.8339
Subjunctive_mood * Predicate_type	3.3494	1.5808	2.12	0.0341
Agent * Predicate_type	-7.2055	79.1236	-0.09	0.9274

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 45.055, df = 6,  $p$ -value = 4.565e-08; Fisher's  $p$ -value = 8.037e-10.

Subjunctive\_mood: X-squared = 0.42941, df = 1,  $p$ -value = 0.5123; Fisher's  $p$ -value = 0.4553.

Agent: X-squared = 5.698, df = 2,  $p$ -value = 0.0579; Fisher's  $p$ -value = 0.05881.

Predicate\_type: X-squared = 7.366, df = 2,  $p$ -value = 0.02515; Fisher's  $p$ -value = 0.01999.

COMMENT: the values of the coefficients C and Dxy indicate a good predictability of the dependent variable "NTF\_or\_PPP" via the independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood", while the coefficient R<sup>2</sup> indicates the model's poor fitting capacity and its poor ability to explain the variability of the data. The  $p$ -values for the Factors "Copula" and "Predicate\_type" contradict the the null hypothesis, while the  $p$ -value of "Subjunctive\_mood" and „Agent“ are too high to do so. The interaction between the Factors "Subjunctive\_mood" and "Predicate\_type" can be described as significant. The  $p$ -value for the Factor „Agent“ within the regression model is considerably different from the value obtained by the Chi-Square and Fisher's tests. In both cases the Factor "Agent" cannot be considered significant.

### 6.3.2. Court files of the Žytomyr town administration (years 1590 and 1635)<sup>121</sup>

Agreeing passives (57) in this sub-corpus slightly prevail over NTF (52). In contrast to Poltava trial records, NTF in these court files are also used as attribute, e.g. *ōbačyl" žje rodyčov" eho ōtca i matku i brata zjekryvavjeno<NTF\_attr>, zbito<NTF\_attr>; Kotoroe sino z khroun"tov" ego ml pana Viljama zabrano<NTF\_attr> v stirty v folvarku i v houm"ne // lyhin"skim" svježo zložono<NTF\_attr> vidjal" i in"šjee eščje z vozov" ne skladano<NTF\_attr> i ne zroucano<NTF\_attr> v tym folvarku boudyči svežo prevezeno<NTF\_attr> vidjal" i ōgledal; pomjenjenaja protjestujučaja, majuči tut", v Sčjenieve zbož"e roznoe i sino pracje zošloho mal"žon"ka ei svoe zložono<NTF\_attr>; khdy toe tilo zabito<NTF\_attr> njebož"čika Mar"tina Jurskoho provadjeno s kostjela Vil"skoho pri byt"nosti vjelju ljudii.*

There are only 4 records of NTF with morphological accusative case, i.e. *a u Vaska Slesara ōtnjato<NTF> i pohrableno<NTF> šablju<ACC\_a-decl>; na dvoch nyvach hrečku<ACC\_a-decl>, a na dvoch wves konmy stadom vytravleno<NTF> i čorno na nyvach učyneno<NTF>; pjerjel" bylo poltory kopy, dano<NTF> bylo za nych" ōchfju<ACC\_a-decl> zolotych" polskich; a u Romana, dei, ōtnjato<NTF> i pohrableno<NTF> sedlo z voilokom, sermjahu<ACC\_a-decl>.* Otherwise NTF is also attested with mask anim in the NP (7), cf. *vepra<ACC\_m\_anim> mu ubito<NTF>; vjep"rja<ACC\_m\_anim> emu zabito<NTF>; i mučono<NTF> eho<ACC\_m\_anim> hodynu na tym" kolje; samoho<ACC\_m\_anim> mučono<NTF> čjerjez hodyn" kyl"ka; khdy byloho<ACC\_m\_anim> do zam"ku pozyvano<NTF>; vzjato<NTF> i pohrableno<NTF> konja voronoho<ACC\_m\_anim>; a hotovych hrošei monety litov"skoe kop" dveste vzjali, šlykov" čirvonych" lisich" pjat', kupleno<NTF> bylo koždoho<ACC\_m\_anim> z nych" po try zolotych" pol"skych";* with mask inan in the NP (1), cf. *vzjato<NTF> i pohrableno<NTF> pulhak<ACC/NOM\_m\_inan>;* with pl inan in the NP (1), e.g. *chrybty, ruki, nohi<ACC/NOM\_m\_inan> kyjami pobito<NTF>;* pl anim in the NP (4), e.g. *tak" ich<ACC/GEN\_pl\_anim> dobrje bito<NTF>, mordovano<NTF>; Kotorych konii<ACC/NOM\_m\_anim>, [...] u pozvech" mjanovano<NTF> budjet; b"čol<ACC/GEN\_pl\_anim> v pasece ubito<NTF>, dveste; za čym prošono<NTF> nas<ACC/GEN\_pron> w dalšoe pomknene;* with neuter noun/pronoun in the NP (6), e.g. *pohrableno<NTF> sedlo<ACC/NOM\_n\_sg> z voilokom; Vidjal" ed"no pobrali, a druhoe<ACC/NOM\_n\_sg> popaljeno<NTF>; khdy sino<ACC/NOM\_n\_sg> toje vjezjeno<NTF>; Kotoroe sino<ACC/NOM\_n\_sg> z khrun"tov" eho ml pana Viljama zabrano<NTF>.*

Apart from legislative formulas like *aby to bylo<COP\_past\_ru> prinjato<NTF> i do knych zapisano<NTF>*, or *(Kazal"nje) est<COP\_pres\_ru> prinjato<NTF> i zapisano<NTF>*, NTF is infrequently encountered with a copula. The very few exx of NTF with past ru copula (8) are attested in

<sup>121</sup> These court files are written by unknown scribes from Žytomyr area.

two types of environment: in clauses with subjunctive/modal meaning (1), i.e. *aby do rozsudku pravneho toe sino*<ACC/NOM\_n\_sg> *vcalje dotrymano*<NTF> *bylo*<COP\_past\_ru>; as well in clauses employed to describe the past action that took place before another action in the past, i.e. those that designate the pluperfect (7), e.g. *khdy priechali do maloho Ščjenieva [...] hdje bylo*<COP\_past\_ru> *toe sino*<ACC/NOM\_n\_sg> *i zbož'e zložono*<NTF>; *pjerjel" bylo poltory kopy, dano*<NTF> *bylo*<COP\_past\_ru> *za nych" ōchfju*<ACC\_a-decl> *zlotych" polskich; ōtor"vali konja šjerstju hnjedoho vzjeli i pohrabili, za ktoroho dano*<NTF> *bylo*<COP\_past\_ru> *zlotych pjatdjesjat" polskich*<NUM>; *A tak" pomjenjenyj voznyi tam" byv"ši, što*<NOM/ACC\_pron> *mi ōb"vožjeno*<NTF> *i spravovano*<NTF> *bylo*<COP\_past\_ru>, *štom vidjel i slyšal" spravvjedlivje bylo; khdy priechali do maloho Ščjenieva w kas" Zabrodja do toho poddanoho svoeho, // hdje bylo*<COP\_past\_ru> *toe sino*<ACC/NOM\_n\_sg> *i zbož'e zložono*<NTF>; *a hotovych hrošei monety litov"skoe kop" dveste vzjali, šlykov" čirvonych" lisich" pjat', kupleno*<NTF> *bylo*<COP\_past\_ru> *kožoho*<ACC/GEN\_m\_inan> *z nich" po tri zlotych" pol"skich"*; *v staini dei vzjali i pohrabili koneei ez"d"nych" poč"tovych" dva ōdin" šer"sti hnedyi zvezda v čole, dano*<NTF> *bylo*<COP\_past\_ru> *za neho trid"cat' kop" hrošii litov"skich"*<NUM>, *druhii kon" šerstju sivyi, dano*<NTF> *bylo*<COP\_past\_ru> *za neho hrošeu litov"skich" kop" sorok"*<NUM>.

Agent expressions (16) occur predominantly in PPP (3) or CP (11) constructions, less frequently in the structure of NTF (2). Agent expressions are attested in the shape of ōd/ōt-PP (7), e.g. *ōd ktoroho*<ōd-PP> *byl" zaprošonyi do zamku na ōbed"* (CP); *byv" zaprošonyi ōd eho ml pana Hanskoho*<ōd-PP>, *deržavcy vil"skoho, na ōbed" do zamku* (CP); *bo byl" esče zaderžanyj ōd eho ml pana Hanskoho*<ōd-PP> (CP); *pan" Mikolai Strybyl" est" zabityi i nasmjert" zamordovanyi ōt pana An"dreja Rusinov"skoho*<ōd-PP> (CP); *i v yzbe byl" ōd pomenenoho eho ml pana Han"skoho*<ōd-PP> *ouvolnenyi* (CP); *ktoroyi ōd protestujučich"*<ōd-PP> *z jal"muž"noju do špitalja byl" vernenyi i toho zaskočivšy posekli* (CP); *byl oužity ōd eho ml pana Stanislava Viljama*<ōd-PP> (CP); *iž ōn" rokou tjepjerješnjeho [...] boudouči ourjadov"nje voz"vanyi ōd" pana Mikolaja Knježin"skoho*<ōd-PP> (CP); *i boudouči zaprošonyi ōd pana Khrodz"žic"koho*<ōd-PP> *na ōbid"* (CP); *Jurskii hjet" zabit" i zamordovan" ōd pana Vac"lava Ščjerbiny i eho pomočnikov"*<ōd-PP> (PPP); *A tym, dei, testamentomъ, ktoroyi ōd mene*<ōd-PP> *s primušenja a s poboev", s pohrozkov ponevolne danyi* (PPP). There are also agents expressed in the shape of čjerjez/čerez-PP (2), e.g. *i tam zabityi zostal" čjerjez rozboinikov"*<čjerjez-PP> (CP); *taja sprava čerez nas*<čjerjez-PP> *ōtsužona ne est"* (CP); as well as in the shape of prjez-PP (1), e.g. *prjez toho Ščjebinu i eho ad"hjerjen"tov"*<prjez-PP> *posječonyi šljachjet"nyi pan" Martin" Jurskii* (PPP). There are 2 records of prjez-PP on NTF, e.g. *i ei prjez*<prjez-PP> *pana Jana Kot"lubaja popjel"njeno*<NTF>; *što budjet prjez toho pjenipotjenta i brata svoeho*<prjez-PP>



*postanov"lenu*<NTF>.

The overwhelming majority of NTF and PPP are formed from perfective verbs (307). There are 22 records of *-no*, *-to* predicates formed from imperfective verb stems, i.e. *samoho mučono*<NTF\_impf>; *tak" ich dobrje bito*<NTF\_impf>; *dveri rubano*<NTF\_impf>; *abo za jakoju vinu hrabeno*<NTF\_impf>; and 24 record of agreeing participles formed from imperfectives, cf. *kotoryi [...] bytem" eho ne est sužony*<PPP\_impf>. All NTF and PPP in these court files are formed from transitive verbs<sup>122</sup>. There are 2 records for NTF formed from iterative perfective transitive verb stems, cf. *khdy byloho do zam"ku pozyvano*<NTF\_pf\_iter> *abo za jakoju vinou hrabeno, by to zabirano*<NTF\_pf\_iter> *i grabit sje ne davali*.

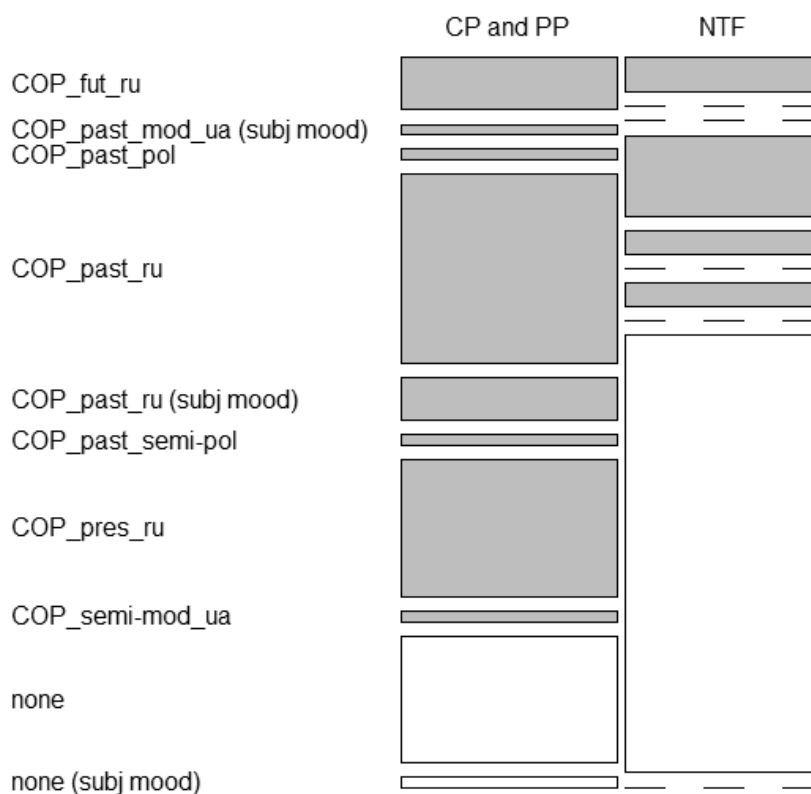
There are 10 cases of non-agreement, or corrupt agreement on participles and *-no*, *-to* forms that have been attested in the court files of the town of Žytomyr. For instance there are records with the NP in agreement with a future tense marking auxiliary, but not with its passive participle, e.g. *kotoryi*<ACC/NOM\_pl> *je v protjestacyi opisano*<NTF> *budutъ*<COP\_fut\_pl><sup>123</sup>. There are also cases of auxiliary in agreement with *-no*, *-to* forms, but (partially) in non-agreement with the subject, i.e. *aby taja protjestacyja*<NOM\_fem>, *jako i eho soznanъe*<NOM\_n> *do knih bylo*<COP\_past\_n> *prinjato*<NTF> *i zapisano*<NTF>. The cases of corrupt agreement in the Court Files of the Žytomyr Town Administration 1590-1635 are not restricted to *-no*, *-to* forms, but also occur with participial and canonical passives, cf. *aby byli*<COP\_past\_pl> *do knih nynješnich prinjata*<PPP\_fem> *i zapisana*<PPP\_fem>; *aby byl*<COP\_past\_m> *vodluhъ artikulъ trinadcatoho v rozdele samom zachovana*<PPP\_fem>.

<sup>122</sup>There is 1 ambiguous record with apparently intransitive (ergative) verb stem in these court files, cf. *až roki svetomichalskie dlja nepribytja eho milosti pana sudi zemskoho ezžony*<PPP\_erg> *ne byli*. Still, it seems to govern the direct object *roki*<NOM\_pl\_inan>.

<sup>123</sup>This sentences seems to have one more copula, 'je', which we, however, hold to be a misprint. As the sentence is almost a page long, we cite only the original clause here: *которое внъ едичи з села Воитовеєцъ, маєтності помененого пана свого, до дому и схованя того ж пана свого в мєстє Ружинє бидичого вєзль, которыи є в протєстачыи вписано бидить в то вбълупи,...*

# Chart 6.3.2.a

## Copula Types in Court Files of the Żytomyr Town Administration



This data frame contains 109 observations of 2 variables. The independent factor “copula” has 10 levels, cf. the table below:

	COP_fut_ru	COP_past_mod_ua (subj mood)	COP_past_pol	COP_past_ru
CP and PPP	5	1	1	18
NTF	3	0	0	7

	COP_past_ru (subj mood)	COP_past_semi-pol	COP_pres_ru
CP and PPP	4	1	13
NTF	2	0	2

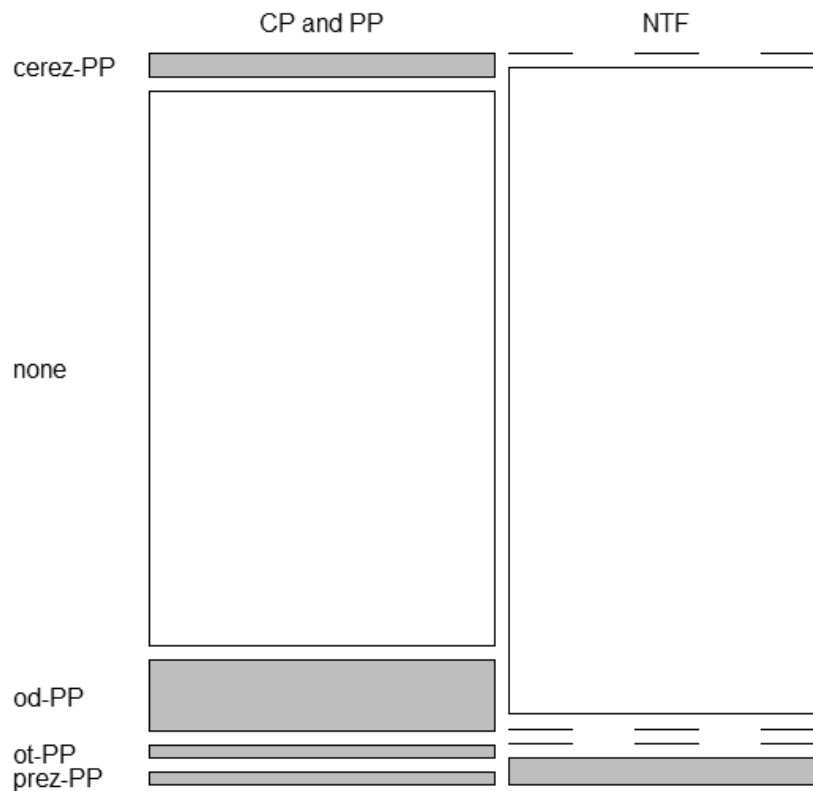
  

	COP_semi-mod_ua	none	none (subj mood)
CP and PPP	1	12	1
NTF	0	38	0

X-squared = 32.4322, df=9,  $p$ -value=0.0001676; Fiher's  $p$ -value = 3.923e-06.

# Chart 6.3.2.b

## Agent Expressions in Court Files of the Żytomyr Town Administration



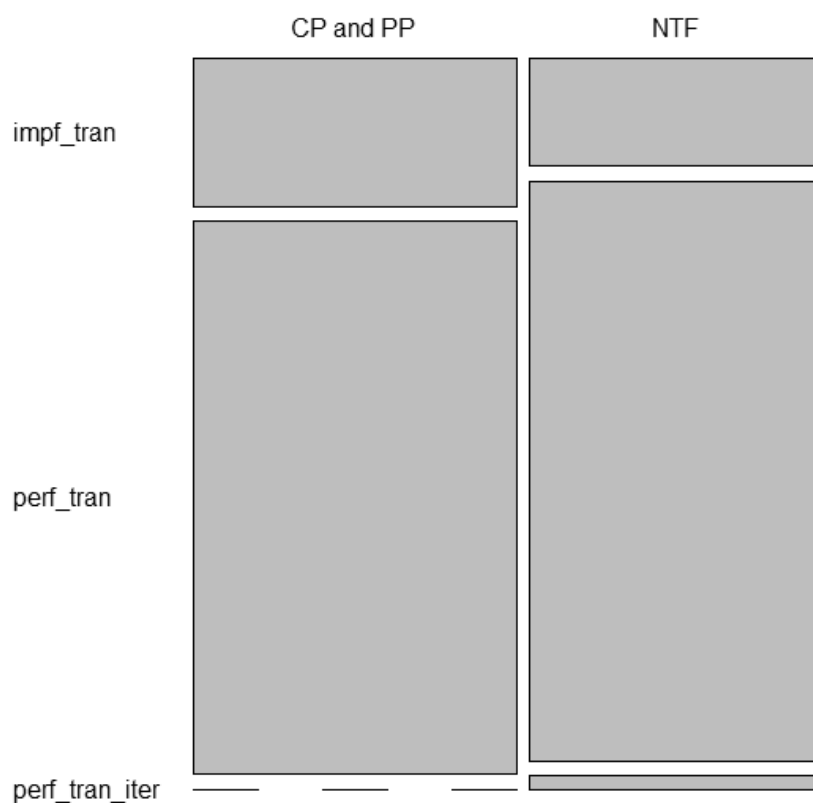
This data frame consists of 109 observations of 2 variables. The independent factor “agent” has 5 levels, cf. the table below:

	cerez-PP	none	od-PP	ot-PP	prez-PP
CP and PP	47	50	6	1	1
NTF	0	0	0	2	2

X-squared = 9.2162, df = 4,  $p$ -value = 0.05592; Fisher's  $p$ -value = 0.01592.

# Chart 6.3.2.c

## Predicate Types in Court Files of the Žytomyr Town Administration



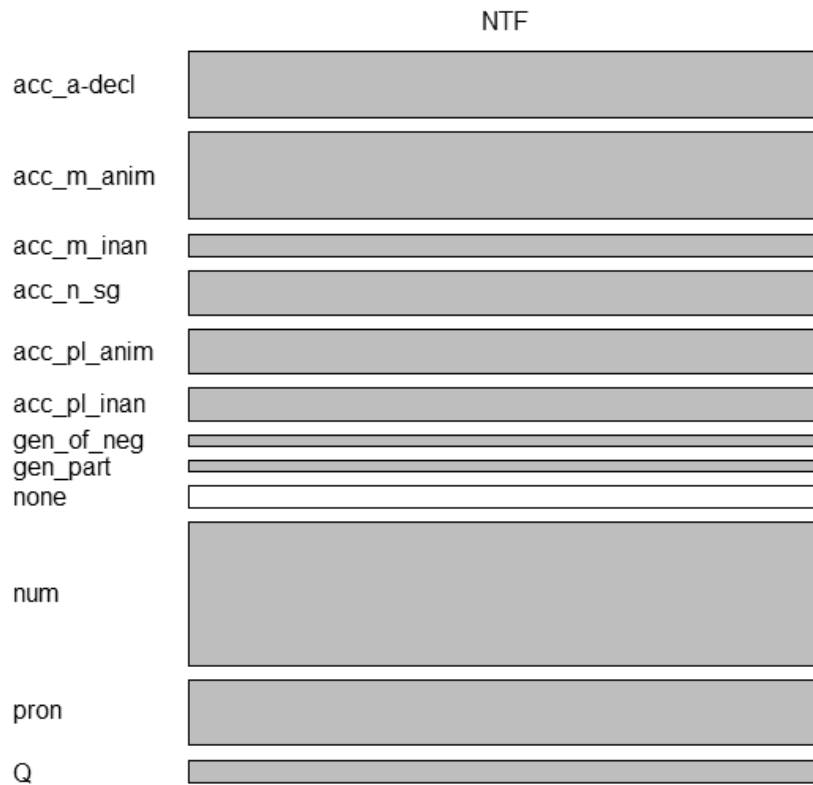
This data frame consists of 109 observations of 2 variables. The independent factor “predicate” has 3 levels, cf. the table below:

	impf_tran	perf_tran	perf_tran_iter
CP and PPP	12	45	0
NTF	8	43	1

X-squared = 1.6195, df = 2, *p*-value = 0.445; Fisher's *p*-value = 0.4648.

## Chart 6.3.2.d

**NP-Type of NTF in Court Files of the Żytomyr Town Administration**



The data frame consists of 52 observations of 2 variables. The independent factor “NP” has 12 levels, cf. the table below:

	acc_a-decl	acc_m_anim	acc_m_inan	acc_n_sg								
NTF	6	8	2	4								
					acc_pl_anim	acc_pl_inan	gen_of_neg	gen_part	none	num	pron	Q
NTF					4	3	1	1	2	13	6	2

X-squared = 31.077, df = 11,  $p$ -value = 0.001071.

### Regression Analysis 6.3.2.e Żytomyr Town Administration Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Subjunctive\_mood + Copula:Agent + Copula:Predicate\_type + Agent:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	109	LR chi2	28.95	R2	0.311	C	0.778
NTF	52	d.f.	8	g	1.430	Dxy	0.556
CP and PPP	57	Pr(> chi2)	0.0003	gr	4.181	gamma	0.608
max	deriv  0.004			gp	0.279	tau-a	0.280
				Brier	0.188		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	-1.2213	0.3723	-3.28	0.0010
Copula	1.2051	0.3028	3.98	<0.0001
Subjunctive_mood	1.9961	1.4978	1.33	0.1826
Agent	0.8517	0.4927	1.73	0.0839
Predicate_type	0.7636	0.6107	1.25	0.2111
Copula * Subjunctive_mood	-1.0551	0.6534	-1.61	0.1064
Copula * Agent	-0.5220	0.2291	-2.28	0.0227
Copula * Predicate_type	-0.6162	0.5026	-1.23	0.2202
Agent * Predicate_type	5.6752	22.2911	0.25	0.7990

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 30.107, df = 7,  $p$ -value = 9.076e-05; Fisher's  $p$ -value = 3.168e-06.

Subjunctive\_mood: X-squared = 0.93722, df = 1,  $p$ -value = 0.333; Fisher's  $p$ -value = 0.2748.

Agent: X-squared = 9.2162, df = 3,  $p$ -value = 0.02655; Fisher's  $p$ -value = 0.007945.

Predicate\_type: X-squared = 1.6195, df = 2,  $p$ -value = 0.445; Fisher's  $p$ -value = 0.4648.

COMMENT: the values of the coefficients C and Dxy indicate a good predictability of the dependent variable "NTF\_or\_PPP" via the independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood", while the coefficient  $R^2$  indicates the model's poor fitting capacity and its poor ability to explain the variability of the data. The  $p$ -value for the Factor "Copula" leads to the rejection of the null hypothesis. Factors "Agent", "Predicate\_type" and "Subjunctive\_mood" are not small enough to reject the null hypothesis. The interaction between Factor "Copula" and Factor "Agent" is significant, since their correspondent  $p$ -value is less than 0.05. The  $p$ -values according to the normality tests basically meet the  $p$ -values inside the model, with the exception of the factor "Agent", whose  $p$ -value outside the regression model is considerably smaller than inside the model, and implies that it is a significant factor.

### 6.3.3. Luc'k castle book (1560-1561)<sup>124</sup>

NTF with nouns of *a*-declension are attested considerably more frequently in Luc'k book than in other two collections of court files we have investigated (38), e.g. *vzeto*<NTF> *korovu*<ACC\_a-decl>, *jalovicu*<ACC\_a-decl> *a byka*; *kudy toe proso i hrečku*<ACC\_a-decl> *do Pohorelec vezeno*<NTF>; *s ktoroho lystu i kopju*<ACC\_a-decl> *jeho mlst dano*<NTF>; *panu Jakymu otrpravu*<ACC\_a-decl> *včyneno*<NTF>; *budu*<ACC\_a-decl> *spaleno*<NTF>; *Savu*<ACC\_a-decl> *zbito*<NTF>; *vzeto*<NTF> *u neho suknju ženskiju koltryšovuju*<ACC\_a-decl>; *ōborvano*<NTF> *sablju tureckuju*<ACC\_a-decl>; *v neho vzeto*<NTF> *sverepu*<ACC\_a-decl> *z vozom*; *poimano*<NTF> *ee*<ACC\_a-decl> *na pašy*; *v neho ōtneťo*<NTF> *sermehu*<ACC\_a-decl>, *šap"ku*<ACC\_a-decl> *i sokiru*<ACC\_a-decl>; *panuju ključnikovuju*<ACC\_a-decl> *zbito*<NTF>. Besides NTF frequently occurs with a neuter noun/pronoun NPs (33), e.g. *bydlo*<ACC/NOM\_n\_sg> *zapidano*<NTF>; *seno*<ACC/NOM\_n\_sg> *vezeno*<NTF>; *žyto*<ACC/NOM\_n\_sg> *požato*<NTF>; *i sosnoje toe*<ACC/NOM\_n\_sg> *porubano*<NTF>; *pole*<ACC/NOM\_n\_sg> *poōrano*<NTF> *i posejano*<NTF>; *i horlo*<ACC/NOM\_n\_sg> *pereteto*<NTF>; with mask anim in the NP (38), cf. *eho*<ACC/GEN\_m\_anim> *bito*<NTF>; *eho*<ACC/GEN\_m\_anim> *skryto*<NTF>; *tam" eho*<ACC/GEN\_m\_anim> *privitano*<NTF>; *toho koneč*<ACC/GEN\_m\_anim> *v dom" panei Polonki ōtvedeno*<NTF>; mask inan in the NP (22), e.g. *zub"*<ACC/NOM\_m\_inan> *vybito*<NTF>; *ōves*<ACC/NOM\_m\_inan> *vypaseno*<NTF> *i potoptano*<NTF>; *dubnik*<ACC/NOM\_m\_inan> *i bereznik*<ACC/NOM\_m\_inan> *svžo porubano*<NTF>; *i dvorec*<ACC/NOM\_m\_inan> *pana Ōalčevskoho zbudovano*<NTF>; with pl anim in the NP (10), e.g. *khdy ich*<ACC/GEN\_pl\_anim> *ōbačeno*<NTF>; *kotorych*<ACC/GEN\_pl\_anim> *pri mne pytano*<NTF>; *tych troch*<ACC/GEN\_pl\_anim> *pod samym dvorom raneno*<NTF>; with pl inan in the NP (10), e.g. *dano*<NTF> *tob [sic!] s kanclerei listy*<ACC/NOM\_pl\_inan>; *škody*<ACC/NOM\_pl\_inan> *nemalye emu podelano*<NTF>.

Besides NTF are attested with a numeral phrase/quantifier/unit of measure/numeral-like nouns as a head, that is forms ambiguous between nominative and accusative (58), e.g. *dereva mnoho*<Q> *vyrubano*<NTF>; *bčoly kolkodeset*<NUM> *podrano*<NTF>; *žyta nemalo*<Q> *teper posejano*<NTF>; *vkošuvano*<NTF> *po trista voz*<unit\_measur> *sena*; *ukradeno*<NTF> *pęteronadcatero*<NUM-like\_noun> *konei*; *vzeto*<NTF> *v neho s komory sorok lokot*<unit\_measur> *polotna*; *vzeto*<NTF> *korov dve*<NUM>, *jalovicy dve*<NUM>, *a konei troe*<NUM>. Moreover NTF occurs with genitive of negation (9), e.g. *aby vžo bolšei toho i lesov ljubeckich*<GEN\_pl\_inan> *ee mlsti ne*<NEG> *pustošono*<NTF>; *aby čerez to v nich piv*<GEN\_pl\_inan> *ne*<NEG> *vareno*<NTF> *i medov*<GEN\_pl\_inan> *ne syčono*<NTF>; *ktoroi*<GEN\_a-decl>, *dei, nihde ne*<NEG> *puščono*<NTF>; with partitive genitive (4), e.g. *hrečki*<GEN\_a-decl> *ouv odnom mestcu*, *prosa*<GEN\_m\_inan> *tež v odnom mestcu*, *ōvsa*<GEN\_m\_inan> *posejano*<NTF> *bylo*;

<sup>124</sup>Since these court files are not available in a machine-readable form yet (due to the encoding problems), they are not as thoroughly scrutinized as other legal documents. Relying on the number of pages, *Luc'k Castle book* seems to be about the same size as *Poltava trial records*. Unfortunately, we can offer no visualization for phenomena encountered in this body of administrative texts.

*jačmenju*<GEN\_m\_inan> *takže potravleno*<NTF> *i popsovano*<NTF>.

NTF is attested with past ru copula (14). NTF co-occurs with copula in environments syncretic between nominative and accusative, and seem to render pluperfect (3), cf. *Tohdy v dvore maetnosti žadnych rečei, što*<ACC/NOM\_pron> *bylo*<COP\_past\_ru> *pervo popisano*<NTF>, *ne našli; ōpovedal*" [...], *iž što*<ACC/NOM\_pron> [...] *prisužono*<NTF> *bylo*<COP\_past\_ru> *mačose moei, panei Ōrine Bolbasovne, věna ōt nebožčika ōtca moeho neōpisanoho tridcat kop hroše*. In environments not syncretic between nominative and accusative the *-no*, *-to* records co-occurring with tense marking auxiliary (7) tend to render pluperfect as well; such records are often encountered in indirect speech, i.e. 1.) *što ž, dei, [...] v ponedelok pozno nad zachodom solnca zēt eho Danilo pošol byl po koņ v dom panei Polonki, ktoroho, dei, koņ*<ACC/GEN\_sg\_anim> *za podački mestskije vzēto*<NTF> *bylo*<COP\_past\_ru> *u sveščennika dmitrovskoho i emu u dvoch kopach zastavleno*<NTF>...; 2.) *Što, dei, eho krolevskaia mlst dlę plaču moeh i dočok moich s tych imenei, u vo što knjahinju Ivanovuju*<ACC\_a-decl> *bylo*<COP\_past\_ru> *uvēzano*<NTF>...; 3.) *buduči ja na posluhach eho krolevske mlsti, na rok pripalyi v rokoch prošlych ku pravu stati ne pospel. Tohdy panei Semenovoi za nestanem*" *moim ku pravu vskazano*<NTF> *ei bylo*<COP\_past\_ru> *z uradu na mne i na žone moei nkoruju sumu*<ACC\_a-decl> *do prava*; 4.) *...ne moh echati, bo mę*<ACC/GEN\_sg\_anim> *bylo*<COP\_past\_ru> *okrutne zbito*<NTF>; 5.) *i choteči tych ljudei, v kotorych mę*<ACC/GEN\_sg\_anim> *bylo*<COP\_past\_ru> *ouvēzano*<NTF>, *pohrabiti*.

With complementizers in the structure, NTF co-occur with copula and bear subjunctive meaning (3), e.g. in environment both syncretic and non-syncretic between nominative and accusative, cf. *i žeby*<C> *tež eho zbože*<ACC/NOM\_n\_sg> *na eho tyždnju tam do toee skryni bylo*<COP\_past\_ru> *sypano*<NTF>; *aby*<C> *tyi voly, korovy i inšeje bydlo*<ACC/NOM\_n\_sg> *do rospravy na rukoemstvo bylo*<COP\_past\_ru> *verneno*<NTF>; *Ōtec Vartik toho ž času dal kopju z onoho lista i prosil, aby*<C> *to*<ACC/NOM\_pron> *bylo*<COP\_past\_ru> *do treteh dnę ōtložono*<NTF>. Otherwise, especially in the environment not syncretic between nominative and accusative, there are no tense marking auxiliaries in the structure of subjunctive *-no*, *-to*, cf. *i žeby*<C> *čerez vse panstvo eho krolevske mlsti [...] nas*<ACC/GEN\_pl\_anim> *propuščovano*<NTF>; *I prosila, po selu chodeči, aby*<C> *ei*<ACC/GEN\_a-decl> *z nim do izby vpuščono*<NTF>, *ktoroi, dei, nihde ne puščono*. It goes without saying that just like in other file records, subjunctive mood exx are especially frequent within end-of-the-entry formulas of chancellery language, e.g. *aby*<C> *to*<ACC/NOM\_pron> *v knihi zamkovyje bylo*<COP\_past\_ru> *zapisano*<NTF>; *aby*<C> *to*<ACC/NOM\_pron> *bylo*<COP\_past\_ru> *zapisano*<NTF>.

There are only 6 agent expressions attested in this vast body of court files. The agent expression *ōt-PP* (4) has been attested in CP (1), PPP (2) and NTF (1), cf. *iž, dei, vsi škody podelany*<PPP> *ōt pana Ivana Borzobogato*<ōt-PP>; *tyi hrani, ōt panov komisarov*<ōt-PP>



*položonye*<PPP>; *i prosil mę na pravo, ktoroe eho młsti zložono*<NTF> *ōt lantvoita mesta Luckoho*<ōt-PP>, *ō zabiistvo bojarina eho; ōt archimandrita dorohobuzskoho Nektarija*<ōt-PP> *byli ōbvineny*<PPP>. Another agent expression attested in this book is *čerez-PP* (2), cf. *kotoryi, dei, byli čerez tatarę*<čerez-PP> *spustošony; Kotoryi, dei, khvalt kolko razov čerez neho*<čerez-PP> *včinenyi*.

Similar to the NTF in *Court Files of the Žytomyr Town Administration* (1590-1635), NTF in *Luc'k book* (1560-1561) are attested in the function of modifiers. Occasionally it is not at all clear whether the NTF is used as predicate or as an modifier, cf. *videl esmi u vorot dvornych" dve došč"ki vybityje, derevo ōtorvano*<NTF>, *hde zabivajut", a v svetlicy ōt vorot ōkonnicy dv ōtorvanyje, a v snech i v svetlicy dveri vybity*. Seldomly NTF is formed from intransitive verb stems, e.g. *I videl" esmi šlēchi tye značny, kudy ežčono*<NTF\_erg>, *užiščom" merono i zatyki pozatykano*.

#### 6.4. Summary

The most productive copula types in CP in *Poltava trial records* from Central Ukraine are past ru and pres ru, in NTF it is past ru. Besides, CP has been (infrequently) attested with fut ru, past pol and pres pol copulas. NTF in these official documents co-occurs predominantly with past ru copula; less frequently it has been attested with fut ru and pres ru copula types as well. NTF records with complementizers and tense marking auxiliaries in the structure are more numerous than those without auxiliaries, which means that – supposed the *-no*, *-to* are headed by noun phrases not syncretic between nominative and accusative – complementizers do trigger auxiliaries into the structure of *-no*, *-to* historically. There are agent expressions in the shape of inst agent and ot-PP in the structure of both CP/PPP and NTF. Agents are more frequent in the structure of CP/PPP than in the structure of NTF. The majority of CP/PPP and NTF records are formed from perfective transitives, while CP/PPP has been also attested with iterative verbal stems. The formation from imperfective verb stems is more frequent in NTF than in CP/PPP.

In *Court files of the Žytomyr Town Administration* the only copula type attested in NTF is past ru (most frequent), followed by fut ru and pres ru copula. In these files complementizers might trigger tense marking auxiliaries into the structure of NTF as well, even though the NTF records with complementizers co-occurring with auxiliaries are considerably less numerous than in *Poltava trial records*. Like in *Poltava trial records*, past ru, pres ru and fut ru copulas are the most productive copula types in CP. CP has been

additionally attested with past mod ua, past pol, past semi-pol and past semi-mod ua copulas. In sharp contrast to Poltava trial records inst agent has not been attested in these court files at all: neither in the structure of periphrastic passive, nor in *-no*, *-to* predicates. NTF co-occurs exclusively with prez-PP, while CP/PPP has been attested with prez-PP, čerez-PP and od/ot-PP. The most frequent agent expression in CP/PPP is od/ot-PP. In comparison to Poltava trial records written in Central Ukrainian language variety, both CP/PPP and NTF are frequently formed from imperfective transitive verbal stems. The formation from iterative stems has only been attested in NTF.

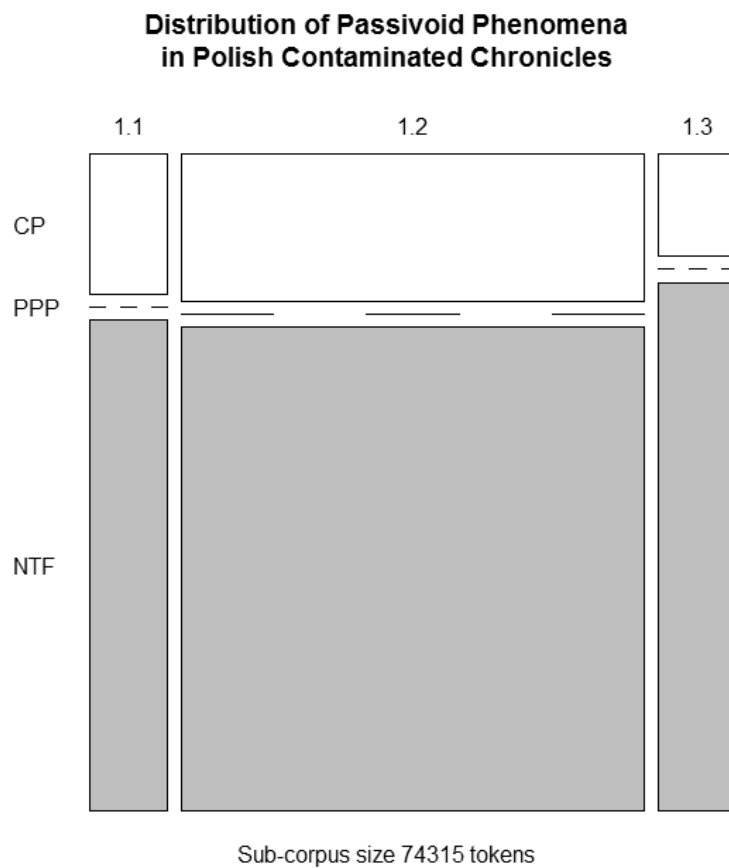
In *Luc'k Castle book* the NTF has been attested exclusively with past ru copula. With complementizers in their structure, NTF co-occur with past ru copula and bear the subjunctive meaning, but only in environments syncretic between nominative and accusative. With past copula in the structure, *-no*, *-to* forms render pluperfect. In contrast to the previous documents we have examined, agent expressions in these numerous court files are very rare: ot-PP has been attested in both CP and NTF, while čerez-PP has been attested only in CP. NTF with *a*-declension nouns are attested considerably more frequently in *Luc'k Castle book* than in other two collections of court files we have investigated.

## 6.5. Polish contaminated texts [74,315 tokens]

*Co się działo w mieście Mohilewie (Mohylevs'ka chronika)* is a text written in Middle Polish language variety. It deals with social and political life of the town of Mohyliv situated in today's eastern Belorussia. The first part of the chronicle (years 1526 till 1701) was compiled in late 17<sup>th</sup> c. by a Mohyliv merchant and town senior Trofim Surta; the second part of the chronicle (years 1701-1746) was put down by Juri Trubnicki, a member of the town chancellery. *Wielkiego księstwa Litewskiego i Zmodskiego kronika (Ol'shevs'kyj litopys)* is a 16<sup>th</sup> c. record that had been found in Vilna Governorate in Ol'shevo, a landed property of A. Chominskij, today's Belorussia. It is a Polish translation of an Old Belorussian chronicle. According to S. L. Ptašickij the translation was made around 1550. *Dziele miasta Witebska (Litopys Pancyrnoho j Averky)*, a 1768 copy written in Polish with Belorussian elements. The chronicle has 3 authors, M. Pancyrnyj, H. Averko and S. Averko. All of them were bourgeois of the town of Vitebsk situated in the north-east of today's Belorussia.

Below is the mosaic plot summarizing the distribution of passivoid phenomena in these potentially contaminated texts, cf.:

## Chart 6.5.a



- 1.1 *Wielkiego księstwa Litewskiego i Zmodskiego kronika (Ol'shevs'kyj litopys)* (16<sup>th</sup> c.), 16,885 tokens
- 1.2 *Co się działo w mieście Mohilewie (Mohylevs'ka chronika)* (1742), 48,663 tokens
- 1.3 *Dziele miasta Witebska (Litopys Pancyrnoho j Averky)* (1768), 8,767 tokens

### 6.5.1. Co się działo w mieście Mohilewie (Mohylevs'ka chronika), 1742 [48,663 tokens]

NTF (266) in this text is considerably more frequent than CP (51). Canonical passive construction is attested with 2 types of tense marking auxiliaries: present tense copula (16), e.g. *Y ztąd iest*<sub><COP\_pres\_ru></sub> *wprowadzony*<sub><PPP\_long></sub> *stroy niemiecki na Moskwie*; and past tense copula (34), e.g. *Y tak ten zdrayca uciekł, bo byłby*<sub><COP\_past\_ru></sub> *sam spalony*<sub><PPP\_long></sub>. All passive participles that occur in this chronicle are long form participles. There are only 2 agent expressions attested in CP in this body of text, *od-PP* (1), cf. *Sam w zamku [stał], wypędziwszy sztucznie Perutego, także Niemca, który był*<sub><COP\_past></sub> *zastawiony w zamku Mohyłowskim od jch m[os]ciow panow Sapiehow*<sub><od-PP></sub>; and *przez-PP* (1), cf. *Potym za wydaniem osobliwym królewskim listem przez wyznamięnionego woyna mohilewskiego*<sub><przez-PP></sub> *pomienione buntownicy sążeni byli*. The *-ne, -te* desinence for neuter sg nouns is regularly employed in periphrastic passives (4), e.g. *A już nabożestwo było*<sub><COP\_past></sub> *skączone*<sub><AGR\_n></sub>, *tylko cerkiew ieszcze nie była zamknięta*.

Contrary to the *-no, -to* manifestations in subjunctive mood in regular, that is non-contaminated Middle Polish texts, the modal particle complementizer *aby* (16) or *żeby* (1) does not trigger the appearance of any tense marking auxiliaries in the structure of *-no, -to* predicates in this chronicle. All 17 *-no, -to* predicates introduced by the complementizer *aby* and *żeby* that have been attested in this text occur without any tense marking auxiliaries. We quote some of them below: *Czasu obiadu Sinicki starszy przysłał swego pokojowego do magistratu, aby*<sub><C></sub> *z miasta onomu kupiono*<sub><NTF></sub> *czapkę*<sub><ACC\_a-decl></sub> *do spania w nocy; aby*<sub><C></sub> *wraz codziennie wszystkie viktualia*<sub><NOM/ACC\_pl\_inan></sub> *od większej rzeczy aż do najmniejszej z miasta wydawano*<sub><NTF></sub>; *wydał ordynans, aby*<sub><C></sub> *wraz z cerkwi wydano*<sub><NTF></sub> *srebra*<sub><GEN\_part></sub> *na kilkaset funtów; aby*<sub><C></sub> *miasta Bychowa*<sub><GEN></sub> *nie*<sub><NEG></sub> *zrabowano*<sub><NTF></sub>; *poki przyszedł ukaz z Hłuchowa od starszych sędziów małorossyiskich, aby*<sub><C></sub> *go*<sub><ACC/GEN\_m\_anim></sub> *pogrzebiono*<sub><NTF></sub>; *żeby*<sub><C></sub> *ich*<sub><ACC/GEN\_pl\_anim></sub> *darowano*<sub><NTF></sub> *żywotem y żeby*<sub><C></sub> *z żonami y dziećmi ich puszczono*<sub><NTF></sub>; *y to*<sub><ACC/NOM\_pron></sub> *wszystko aby*<sub><C></sub> *prowadzono*<sub><NTF></sub> *do Kopysia na pułki*.

There are only 3 tense marking auxiliaries attested in the structure of *-no, -to* predicates – all of them however can be agreeing participles. Namely, past copula *było* co-occurs with *-no, -to* as the sole overt member of NP, that is an NP without any head noun (1), cf. *A z mostu, co przeciwko Łupolowa, iōdzano*<sub><NTF></sub> *gruntami wyszszymi, a choćby gdzie y izba stała na gruncie wysokim, to zrzucano*<sub><NTF></sub> *y było*<sub><COP\_past></sub> *moszczono*<sub><NTF></sub> *mostami, aż koło kościoła Bernardynskiego do samego piekła*; copula also occurs with pronominal complement that has syncretic nominative and accusative forms (1), cf. *Nie kątętuąc się krol*

*szwedzki takowemi prowiantowemi y pieniǳniemi kontrybucyami obiachał sam cerkwi znaczniejszy, gdzie mało co widząc srebra po obrazach, (bo co<NOM/ACC\_pron> znaczniejszego było<COP\_past> pochowano<NTF> w ziemi); as well as with a nominal phrase headed by a lexical neuter noun (1), cf. ...ktoremu hetmanstwo<ACC/NOM\_n\_sg> było<COP\_past> nakazne dano<NTF>. Otherwise the past copula *było* is attested in periphrastic passives, cf. ...srebra łomanego w różnych sztukach, w kubkach, czarkach, ktore<NOM\_pron> było<COP\_past> zbierane<AGR> na szatę na obraz najswiętszej panny Maryey Bromney; ...na którą cerkiew drzewo<NOM\_n\_sg> było<COP\_past> wożone<AGR> z Hwoźdowki; Od ktorego okrzyku miasto<NOM\_n\_sg> było<COP\_past> przepłoszone<AGR>.*

The lexical and morphological content of the direct object complement in the structure of *-no*, *-to* is diverse. There are 21 records of direct object complements irrefutably marked with accusative, e.g. *W ten czas kniahynię<ACC\_a-decl> Urusową, niewiastę iuż starą, w Borowsku spalono<NTF>; Tegoż czasu y aptekę<ACC\_a-decl> carską prowadzono<NTF> przez Mohylow do Litwy; W tym roku w decembrze przed bożym narodzeniem przez miasto prowadzono<NTF> bielugę<ACC\_a-decl> zbyt duży<ACC\_a-decl>; wielką dziurę<ACC\_a-decl> w woysku szwedzkim uczyniono<NTF>; a starszynę<ACC\_a-decl> karmiano<NTF> po domach; Matkę<ACC\_a-decl> także onego osobliwie wzięto<NTF> pod wartę; Bracką<ACC\_a-decl> cerkiew nakryto<NTF>.* None of the 21 *-no*, *-to* records occurs with a tense marking auxiliary in their structure.

There are 54 records of internal argument expressed with mask anim singular, cf. *Po śmierci Zygmunta Władysława<ACC/GEN\_m\_anim> na królestwo Polskie obrano<NTF>; Prezętowano<NTF> w Wilnie chłopca<ACC/GEN\_m\_anim>, mającego złoty ząb; Popowicza też na Siebier w zyskę zesłano<NTF>; ktorego<ACC/GEN\_m\_anim> podług miastu służących spotykano<NTF> iako senatora z cechami y chorągwią kupiecką; Tegoż czasu posyłano<NTF> szpiega<ACC/GEN\_m\_anim> do Słucka dla wiadomości o szwedach; Nazajutrz y żyda<ACC/GEN\_m\_anim> z Dniepru wywleczono<NTF>; Gdy go<ACC/GEN\_m\_anim> na rewokacyę z lanemi swieczami prowadzono<NTF>; A tak onego<ACC/GEN\_m\_anim> za poradą duchowieństwa wzięto<NTF> na łańcuch iako psa; A po tym onego<ACC/GEN\_m\_anim> poprowadzono<NTF> na różne miejsca cudowne, błagając cud bożki, aby raczył onego odmienić ze psa w człowieka; Potym iego<ACC/GEN\_m\_anim> jeneralną sessyą z woytowstwa degradowano<NTF>; Y tam krola<ACC/GEN\_m\_anim> z wielką pompą, iako znacznego kawalera, pogrzebiono<NTF>.*

There are 14 records of *-no*, *-to* with neuter nominal or pronominal complements, that are syncretic between nominative and accusative, cf. *Chłud alias drzewo<ACC/NOM\_n\_sg> na te wały w kogo tylko nalezli brano<NTF>, bogatym placono<NTF>, a ubogich krzywdzono<NTF>; ktore pieniądze<ACC/NOM\_n\_sg> na iednym koncu stoła pokazano<NTF>, a na drugim koncu oblig podpisano<NTF>; A tak w domu p[ana] woyta za wartą całe miasto<ACC/NOM\_n\_sg> taxowano<NTF>;*

*Ōtedy na ten czas siano<ACC/NOM\_n\_sg> odbierano<NTF> na wagę y słoninę, a owsy y krupy na miarę; A potem ciało<ACC/NOM\_n\_sg> na sankach w skrzyni alias w trunie szescią konmi prowadzono<NTF> y postanowiono<NTF> w cerkwi Spaskiej katedralney na katefalku przy znaczney apprehensij; A zaraz rozdzielono<NTF> miasto<ACC/NOM\_n\_sg> Mohyłow na szestnascie kwater.*

There are 41 cases of masc pl anim accusative-genitive forms, cf. *Tegoż roku pan bog poszczęścił cesarzowi, że y francuza na morzu kilkanascie okrętow zbił, ynnych pobrał, ynnych<ACC/GEN\_pl\_anim> potopiono<NTF>; Bijano<NTF> krolow<ACC/GEN\_pl\_anim> y podmątwami; Tegoż czasu dla przechodu tych pułkow moskale poczęli robic most przez Dniepr, którym y z miasta dodawano<NTF> ludzi<ACC/NOM\_pl\_anim> dla prętszey roboty; Ostatnich dni jula prowadzono<NTF> Sinickich<ACC/GEN\_pl\_anim> przez Mohyłow przy znaczney moskiewskiej assistęcij; Także z miasta dawano<NTF> y wiktowano<NTF> krawcow<ACC/GEN\_pl\_anim>, rymarzow<ACC/GEN\_pl\_anim>; Ustawicznoscią ludzi<ACC/NOM\_pl\_anim> dodawano<NTF> na robotę mostow setniami; Dano<NTF> z ratusza żołnierzow<ACC/GEN\_pl\_anim> y zaraz tych excessantow<ACC/GEN\_pl\_anim> spiących pobrano<NTF>; W niedziel tedy szesc po smierci monarchi po wojewodztwach y powiatach sędziow<ACC/GEN\_pl\_anim> obierano<NTF> kapturowych; Gdy kto nie mógł wypłacie nałożonego sobie podatku, takowych<ACC/GEN\_pl\_anim> sadzano<NTF> na wieżę y pod wieżę do więzienia. There are 31 records with pl inan nouns NPs, forms syncretic between nominative and accusative, cf. *y wiktualnych rzeczy<ACC/NOM\_pl\_inan>, iako to wina, piwa, miodu, z ratusza przyspasabiano<NTF>; Pozamykano<NTF> bramy<ACC/NOM\_pl\_inan>, ōderzono<NTF> w bęben na trwogę, obaczę a iuż zamek gory; y te piece<ACC/NOM\_pl\_inan> tam stawiano<NTF>; a podkowy<ACC/NOM\_pl\_inan> przez akomodacye różnym oficerom zniesiono<NTF>.**

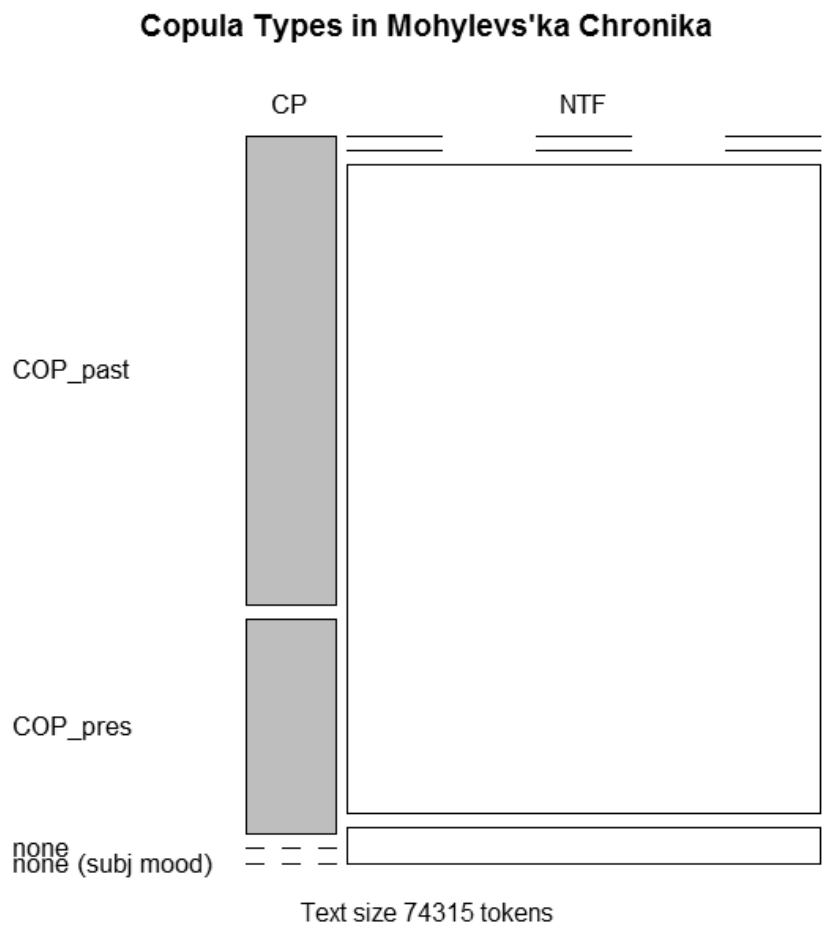
There are 17 NTF records with a pronoun syncretic between nominative and accusative, cf. *Co<ACC/NOM\_pron> wszystko, iak bydło, tak ryby, w ziemię pozakopywano<NTF> dla smrodu; A to<ACC/NOM\_pron> wszystko budowano<NTF> ze skarbu ratusznego mieskiego; Iednak ze wszystko<ACC/NOM\_pron>, kto co opoznał, porozbierano<NTF>; ale to<ACC/NOM\_pron> pohamowano<NTF>; nic<ACC/NOM\_pron> tam nie znaleziono<NTF>;* as well as 21 masc sg inan nouns syncretic between nominative and accusative in the NP, cf. *Dzwon<ACC/NOM\_m\_inan> bracki wielki, który słynol Rebrowiczowski, odlano<NTF>; [Za mo]dlitwę tąż monaster<ACC/NOM\_m\_inan> Solowecky przez szturm wycięto<NTF>; [Tego mon]strum<ACC/NOM\_m\_inan> żywe tam do diabła zakopano<NTF>; dano barabanszczykowi kieliszek<ACC/NOM\_m\_inan> wodki dobrej; a zatym Radionowi zapiekszy klucz<ACC/NOM\_m\_inan> w pirogu podano<NTF>;* and with feminine noun of non-*a*-declension (1).

Besides, *-no*, *-to* in this text are also attested with partitive genitive (11) and genitive of negation (5), cf. *ryby<GEN\_part> marzle dawano<NTF> wozami; kupowano<NTF> trawy<GEN\_part> za*

*złotych szesćdziesiąt; Łupolowa<GEN> nie<NEG> palono<NTF>; aby znow drugiey, srozszy bomb<GEN> na obiad nie<NEG> przysłano<NTF>. There are also numeral phrases and quantified expressions in the NP (44), cf. Y lubo moskwy dosc<Q> pobito<NTF>; kilkadziesiąt<Q> baranow, gęsi y kury dawano<NTF> stadami; Y soli wydano<NTF> beczek dwiescie<NUM>; Miesiąca maja y junia w Bychowie czarownikow kilka pod dziesięć<NUM> spalono<NTF>, a ynrie pouciekali na Ukrajnę; aby z miasta wydano<NTF> podług taryfy orszanskiey podyrunowey siana wozow osmset<NUM>; za ktorego piąciu<NUM> panow na smierc haniebną skazano<NTF>; gdzie po wykonaney przysiędze przez stronę powodową pieńć<NUM> onych buntownikow ścięto<NTF>.*

We have located only one agent expression in the structure of NTF in this text, which however designates a collective noun or a group of people, not a concrete doer of the action, i.e. *Suchary wydano z miasta, a podkowoy przez akomodacye<przez-PP> różnym oficerom zniesiono<NTF>.*

Chart 6.5.1.a



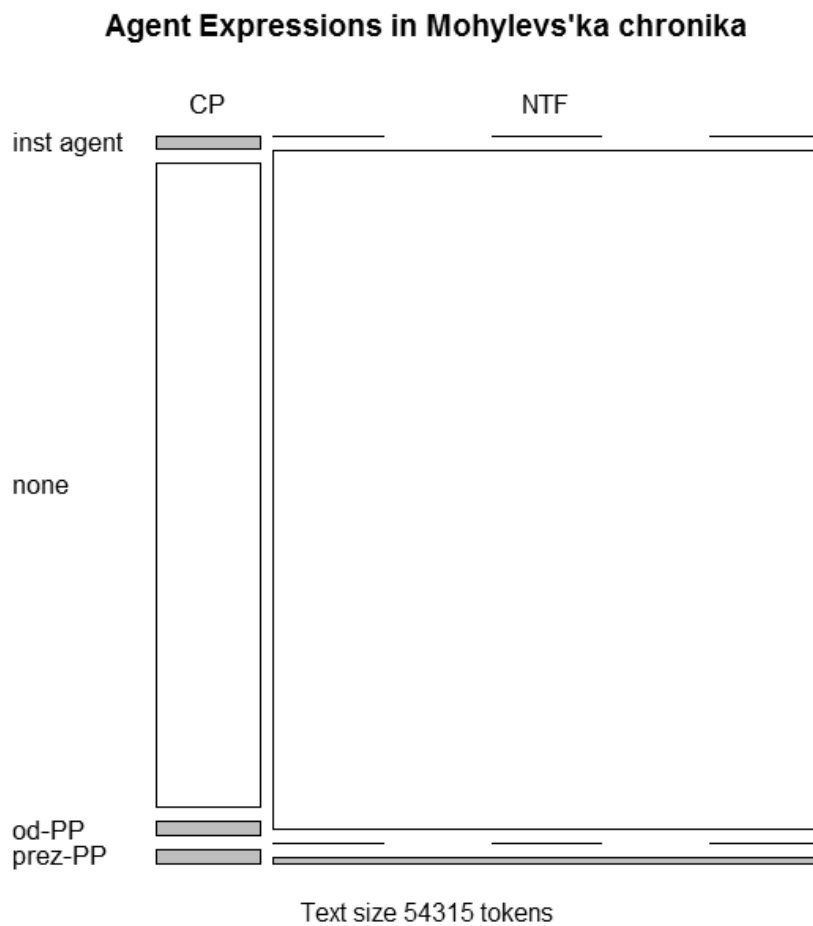
This data frame consists of 317 observations of 2 variables. The independent factor “copula” has 4 levels, cf. the table below:

	COP_past	COP_pres	none	none (subj mood)
CP and PPP35	16	0	0	
NTF	0	0	252	14

X-squared = 317, df=3, *p*-value = 2.2e-16; Fisher's *p*-value < 2.2e-16.



**Chart 6.5.1.b**

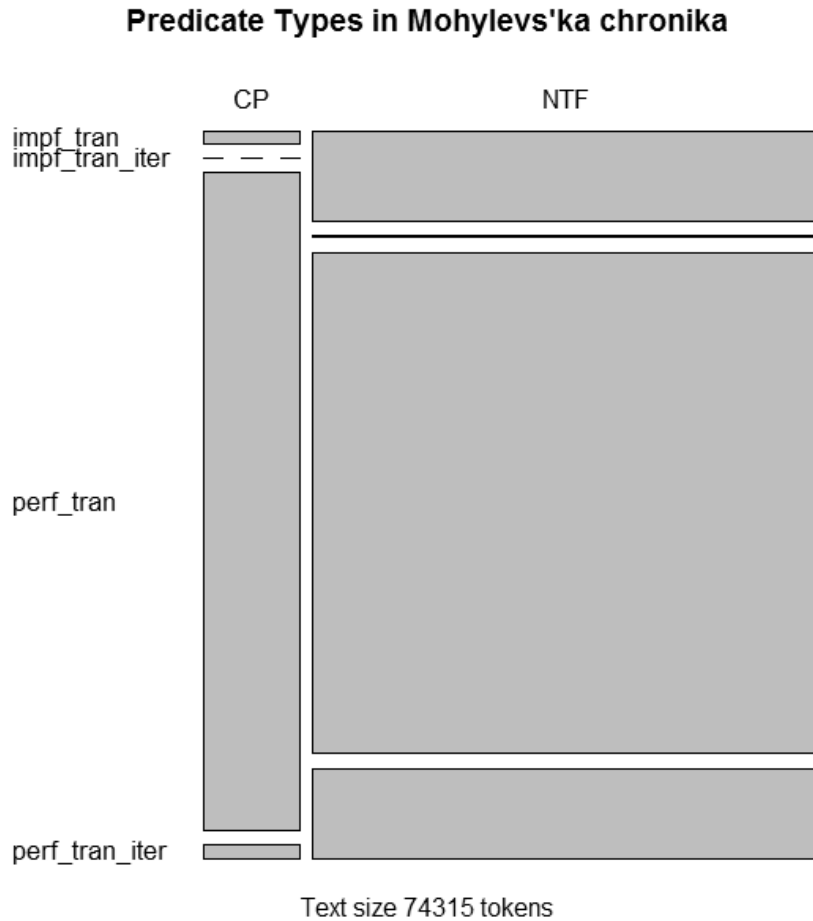


This data frame consists of 317 observations of 2 variables. The independent factor “agent” has 4 levels, cf. the data table below:

	inst agent	none	od-PP	prez-PP
CP and PPP1	48	1	1	
NTF	0	264	0	2

X-squared = 11.2067, df = 3,  $p$ -value = 0.01066; Fisher's  $p$ -value = 0.03106.

**Chart 6.5.1.c**

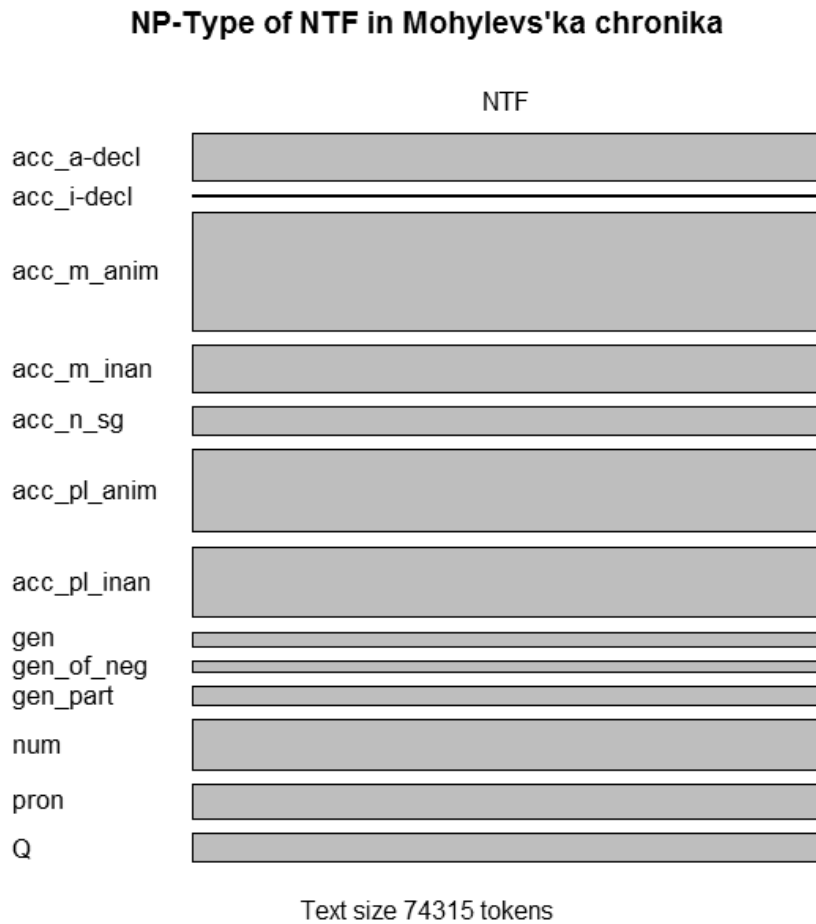


This data frame consists of 317 observations of 2 variables. The independent factor “predicate” has 4 levels, cf. the table below:

	impf_tran	impf_tran_iter	perf_tran	perf_tran_iter
CP and PPP1	0	49	1	
NTF	35	1	195	35

X-squared = 12.524, df = 3,  $p$ -value = 0.005789; Fisher's  $p$ -value = 0.001526.

**Chart 6.5.1.d**



The data frame for this sub-corpus consists of 266 observations of 2 variables. The independent factor “NP” 13 levels, cf. the table below:

	acc_a-decl	acc_i-decl	acc_m_anim	acc_m_inan	acc_n_sg							
NTF	23	1	57	23	13							
						acc_pl_anim	acc_pl_inan	gen	gen_of_neg	gen_part	num	pron
NTF						40	34	7	5	9	24	17
												Q
												13

X-squared = 145.6, df = 12,  $p$ -value < 2.2e-16.

# Regression Analysis 6.5.1.e

## Mohylevs'ka chronika

### Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type + Copula:Agent + Copula:Predicate\_type + Subjunctive\_mood:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	317	LR chi2	279.67	R2	1.000	C	1.000
NTF	266	d.f.	6	g	8.574	Dxy	1.000
PPP and CP	51	Pr(> chi2)	<0.0001	gr	5293.021	gamma	1.000
max	deriv  0.002			gp	0.271	tau-a	0.271
				Brier	0.000		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	-11.7527	25.9059	-0.45	0.6501
Copula	23.0312	57.3777	0.40	0.6881
Subjunctive_mood	-0.1806	124.7134	0.00	0.9988
Agent	-0.1806	277.1280	0.00	0.9995
Predicate_type	-0.1068	33.8703	0.00	0.9975
Copula * Agent	1.0249	346.3503	0.00	0.9976
Copula * Predicate_type	1.4790	396.8640	0.00	0.9970
Subjunctive_mood * Predicate_type	0.1068	131.0508	0.00	0.9993

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 317, df = 2,  $p$ -value < 2.2e-16; Fisher's  $p$ -value < 2.2e-16.

Subjunctive\_mood: X-squared = 1.6998, df = 1,  $p$ -value = 0.1923; Fisher's  $p$ -value = 0.1375.

Agent: X-squared = 11.207, df = 2,  $p$ -value = 0.003686; Fisher's  $p$ -value = 0.01402.

Predicate\_type: X-squared = 12.524, df = 3,  $p$ -value = 0.005789; Fisher's  $p$ -value = 0.001526.

COMMENT: The values of the coefficients C, Dxy, and  $R^2$  indicate 100% predictability of the dependent variable “NTF\_or\_PPP” from the independent variables “Copula”, “Agent”, “Predicate\_type” and “Subjunctive\_mood”, as well as an excellent fitting ability of the model. All  $p$ -values in the second chart are consistent with the null hypothesis, or the statement that these factors do not contribute to the values of the variable NTF\_or\_PPP. In the Chi-Square and Fisher's tests, however, the  $p$ -values of “Copula”, “Agent”, “Predicate\_type” are very low, which demonstrates high significance of these Factors, which was not captured by the logistic regression model.

### 6.5.2. Wielkiego księstwa Litewskiego i Zmodskiego kronika (Ol'shevs'kyj litopys), 16<sup>th</sup> c. [16,885 tokens]

NTF (32) records in this chronicle are more numerous than CP (8) records. The majority of *-no*, *-to* records in this text are headed by noun phrases syncretic between nominative and accusative (9), cf. *i złożono<NTF> imię<ACC/NOM\_n\_sg> tego xiążęcia pospołu z rzeką; a dla tego to mieszcze<ACC/NOM\_n\_sg> od tich czasow przezvano<NTF> Swintoroga; A kiedi ktorego wielkiego xiędza litewskiego abo pana spalono<NTF> ciała<ACC/NOM\_pl\_inan> ich, tegdi kładli przy nich pasnokti risie abo niedźwiedzie; i nazvano<NTF> imię<ACC/NOM\_n\_sg> iemv Lawrisz; i voysko<ACC/NOM\_n\_sg> wszitko naglovę porażono<NTF>; a zastęp<ACC/NOM\_m\_inan> iego wszitek pobito<NTF>; a to<ACC/NOM\_pron> mnie z Niemiec powiedano<NTF>; pobito<NTF> mnostwo<Q> xiążąt i boyar; Panu Stanislaui Gastoltu dano<NTF> Troczkie voievodstvo<ACC/NOM\_n\_sg>.*

There is 1 *-no*, *-to* record headed by an NP syncretic between nominative and accusative co-occurring with the past auxiliary *było*, cf. *I obierze sobie wielki xiędz Swintorog mieszcze na pusci barzo czudne podle rzeki Vielyey, gdzie rzeka Vilna wpada w Vielyą, i prosił sina swego Skirmunta, a na tim mieszczy było<COP\_past\_ru> zgłiszcze<ACC/NOM\_n\_sg> vczyniono<NTF>, gdzie bi go vmarlego spalono; there is another one headed by accusative-genitive plural animate form, cf. I przikazał sinv swemu, abi go po śmierci na tim mieszczy, gdzie bi go szegl, wszitkich<ACC/GEN\_pl\_anim> xiążąt litewskich i znamienitich boyar palono<NTF> było<COP\_past\_ru>, aże bi nigdzie indziej ciała vmarlich nie bili ższone, tilko tam.*

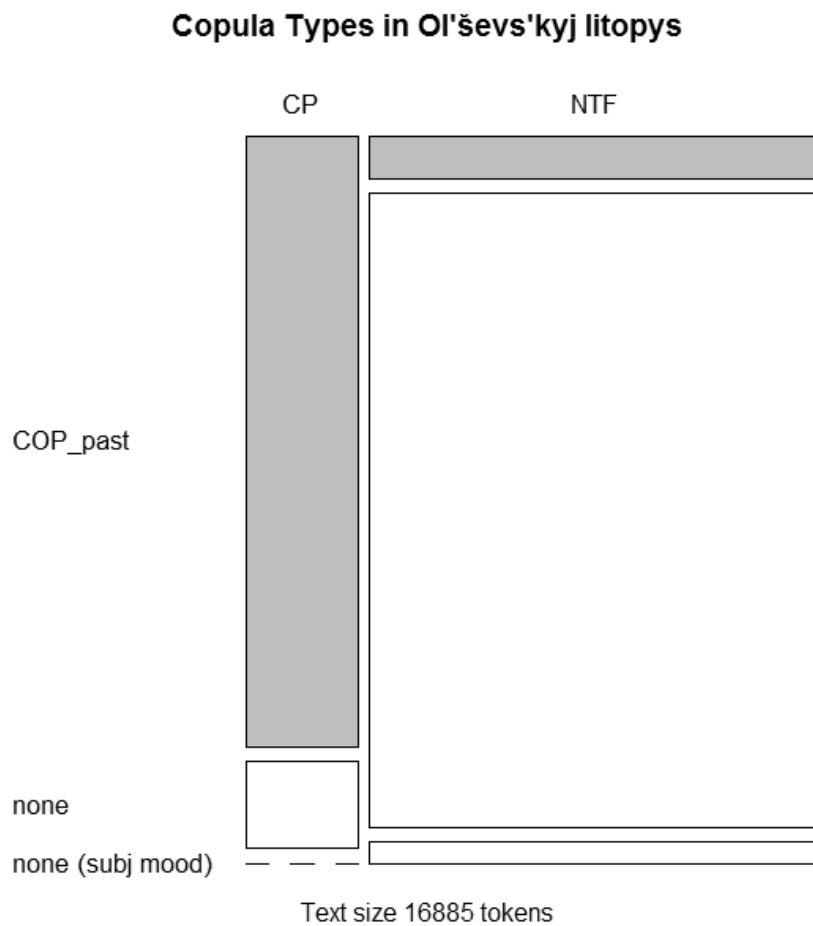
The NTF is also attested with masc sg anim NPs (6), cf. *xiędza Iurgia Lingwieievicza<ACC/GEN\_m\_anim> vbito<NTF>, xiędza Vasila Siemionovicza<ACC/GEN\_m\_anim> poymano<NTF>; iednego<ACC/GEN\_m\_anim> zvano<NTF> Prokszą; Czara zavolskiego<ACC/GEN\_m\_anim> z Litwi puszczo<NTF>; Krol wielki xądz Alexander vmarł, a Zigmunta<ACC/GEN\_m\_anim> na wielkie xąstwo wzięto<NTF>; Krolewicza młodego Zigmunta Augusta<ACC/GEN\_m\_anim> na wielkim xiąstwie Litewskim posadzono<NTF>. NTF also occurs with numeral phrases and quantified expressions in the NP (2), cf. *i pobito<NTF> ich wiele<Q>; i wiele<Q> lvdzi barzo posieczono<NTF>; a lvdzi barzo wiele<Q> poscinano<NTF> i w ięchtwo pobrano<NTF>; i lvdzi barzo wiele<Q> powiedzono<NTF> w ięchtwo; with masc plural in the NP (7), cf. *a inich živich<ACC/GEN\_pl\_anim> poymano<NTF>; ktorich tam xiążąt litewskich<ACC/GEN\_pl\_anim> pobito<NTF>; a inssich<ACC/GEN\_pl\_anim> w ięstwo poymano<NTF>; Tatar<ACC/GEN\_pl\_anim> pobito<NTF> pot Kliczekiem w dzien panni Mariey Snieżney; Panow<ACC/GEN\_pl\_anim> poymano<NTF> na Viedrossi; Tatarow<ACC/GEN\_pl\_anim> pobito<NTF> za Kyeven ve czterdziesti milach o gromniczach na Holssanici; Tegosz lata pobito<NTF> tatar<ACC/GEN\_pl\_anim> na Holvey; there is 1 record of an *a*-declension noun in the structure of NTF, cf. *Tegosz roku wszitką ziemią popisovano<NTF>; and 1 record of nominative as object case, cf. Moskwa<NOM\_a-****

decl> *pot Orssq pobito*<NTF> *pot lati bożego naro[dzenia] tisiqć pięćset dziewiątego*.

The instances of CP (8) are less numerous than those of *-no*, *-to* structures. Canonical passive is attested with *zostać*-copula (1) and *być*-copula (7) in the past tense, and only short form participles, cf. *vmrze i polożon*<PPP\_short> *bil*<COP\_past> *v świętego Zophiego w Poloczku z oycem swim w grobie iednim; ktory bil*<COP\_past> *naydzion*<PPP\_short> *v orlovim gniazdzie; i poył sobie krolewną Iadwiga, i koronovqn*<PPP\_short> *bil*<COP\_past>; *Zlota vlička bila*<COP\_past> *othworzona*<PPP\_short>; *i voysko wszitko ich pobite*<PPP\_short> *na mieszczy zostalo*<COP\_past\_zostac>; *aż bi nigdzie indziej ciała vmarlich nie bili*<COP\_past> *ższone*<PPP\_short>. The presence of complementizer *bi* in the structure of NTF (2) in this text may or may not trigger the tense marking auxiliary *bito*, cf. *gdzie bi*<C> *go vmarlego spalono*<NTF>; *I prikazal sinv swemu, abi*<C> *go po smierci na tim mieszczy, gdzie bi go szegl, wszitkich xiqżqł litewskih i znamienitich boyar palono*<NTF> *bito*<COP\_past>.

CP in this early chronicle is attested with overt agent expressions, namely with *od-PP* (2), cf. *ktori bil*<COP\_past> *poymqn od niemczow*<od-PP> *na Kunasovie; i sama bila*<COP\_past> *chwalona od lvdzi*<od-PP> *za boga*. Only NTF in this early or mid-16<sup>th</sup> c. chronicle can be formed from imperfective verbal stems.

**Chart 6.5.2.a**

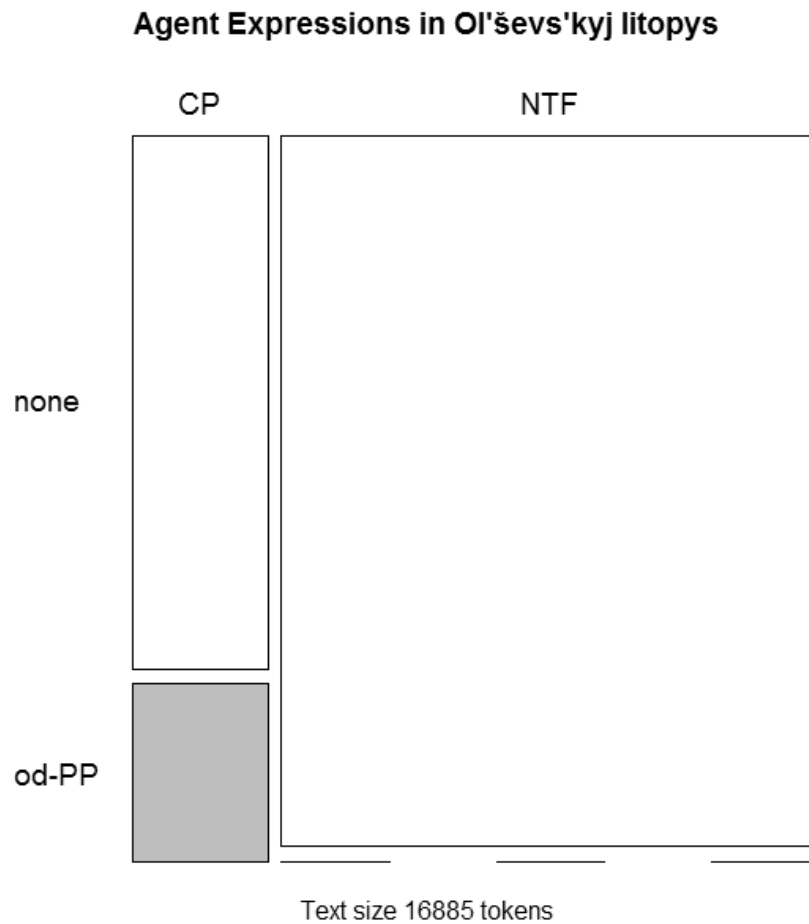


This data frame consists of 40 observations of 2 variables. The independent factor “copula” has 3 levels, cf. the table below:

	COP_past	none	none (subj mood)
CP and PPP7	1	0	
NTF	2	29	1

X-squared = 24.236, df = 2,  $p$ -value = 5.46e-06; Fisher's  $p$ -value = 1.463e-05.

**Chart 6.5.2.b**



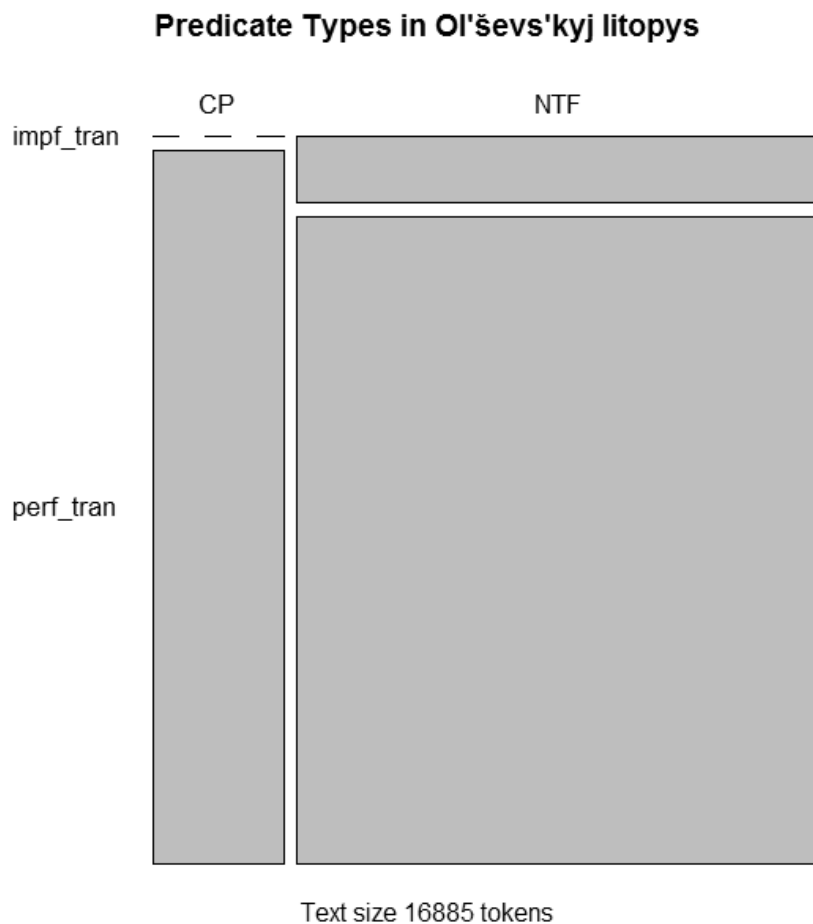
This data frame consists of 40 observations of 2 variables. The independent factor “agent” has 2 levels, cf. the table below:

	none	od-PP
CP and PPP6	2	
NTF	32	0

X-squared = 3.9803, df = 1,  $p$ -value = 0.04604; Fisher's  $p$ -value = 0.0359.



**Chart 6.5.2.c**

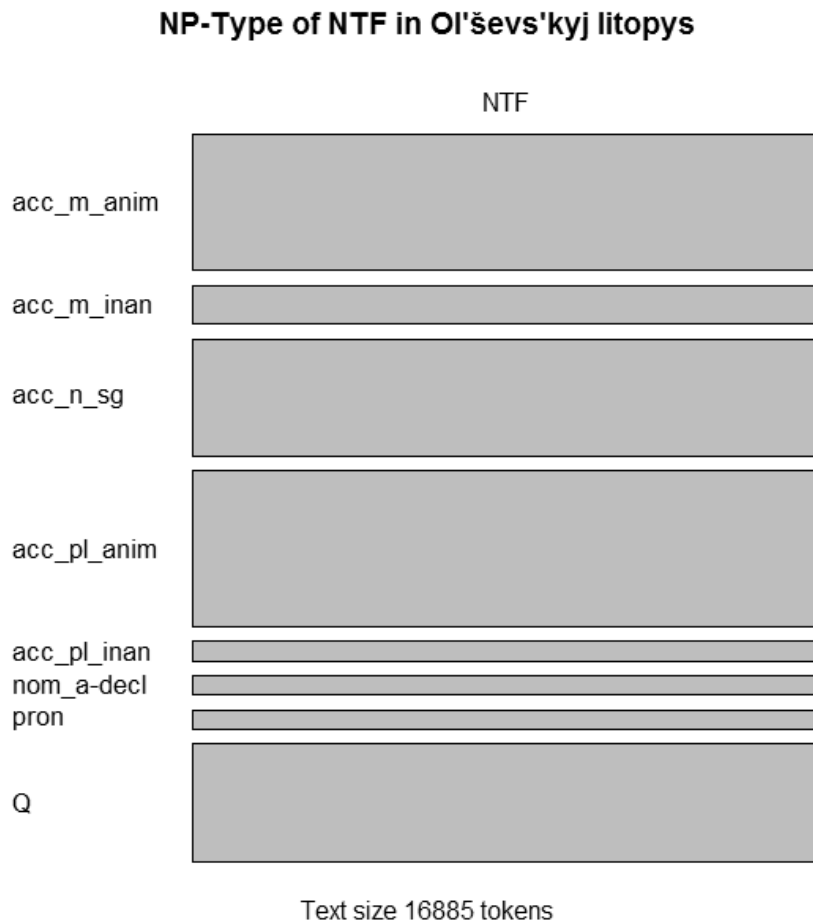


This data frame consists of 40 observations of 2 variables. The independent factor “predicate” has 2 levels, cf. the table below:

	impf_tran	perf_tran
CP and PPP0	8	
NTF	3	29

X-squared = 0.022523, df = 1,  $p$ -value = 0.8807; Fisher's  $p$ -value = 1.

**Chart 6.5.2.d**



The data frame consists of 32 observations of 2 variables. The independent factor “NP” has 8 levels, cf. the table below:

	acc_m_anim	acc_m_inan	acc_n_sg	
NTF7	2	6		
	acc_pl_anim	acc_pl_inan	nom_a-decl	pron
NTF8	1	1	1	6

X-squared = 16, df = 7, *p*-value = 0.02512.

# Regression Analysis 6.5.2.e

## Ol'ševs'kyj litopys

### Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type + Copula:Agent + Copula:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	40	LR chi2	34.29	R2	0.910	C	0.988
NTF	32	d.f.	6	g	4.991	Dxy	0.977
PPP and CP	8	Pr(> chi2)	<0.0001	gr	147.044	gamma	1.000
max	deriv  0.002			gp	0.320	tau-a	0.321
				Brier	0.021		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	-9.7462	25.1600	-0.39	0.6985
Copula	11.5380	25.1832	0.46	0.6468
Subjunctive_mood	0.0000	133.1344	0.00	1.0000
Agent	20.4021	207.5431	0.10	0.9217
Predicate_type	0.0000	95.8066	0.00	1.0000
Copula * Agent	-11.5380	292.4320	-0.04	0.9685
Copula * Predicate_type	-11.5380	162.0858	-0.07	0.9433

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 19.794, df = 1,  $p$ -value = 8.626e-06; Fisher's  $p$ -value = 1.463e-05.

Subjunctive\_mood: X-squared = 3.2597e-30, df = 1,  $p$ -value = 1; Fisher's  $p$ -value = 1.

Agent: X-squared = 3.9803, df = 1,  $p$ -value = 0.04604; Fisher's  $p$ -value = 0.0359.

Predicate\_type: X-squared = 0.022523, df = 1,  $p$ -value = 0.8807; Fisher's  $p$ -value = 1.

COMMENT: Low  $p$ -value in the Model Likelihood Ratio Test indicates that the logistic regression model fits the data well. The coefficients  $R^2$ , C and Dxy testify that the model's predicting and fitting capacity is close to 100%. The  $p$ -values of the core Factors and their interactions are very high, so that they do not contradict the null hypothesis. The  $p$ -values of the factors "Copula" and "Agent" indicate their significance for the values of the variable "NTF\_or\_PPP" if the independence tests are applied.

### 6.5.3. Dziele miasta Witebska (Litopys Pancyrnoho j Averky), 1768 [8767 tokens]

In this text NTF (29) is more frequent than CP (6). NTF construction in this short text is attested with masc singular anim in the NP (2), e.g. *Mieszczanie witebscy nie odważyli sie dla tego, ze bendono<NTF> go<ACC/GEN\_m\_sg> tymi wielko summe wojewodzanom winni; ktorego<ACC/GEN\_m\_sg> z bratem iego proprowadzono<NTF> zkowanych na Moskwe*; masc singular inan NPs (3), cf. *Wyrydarz<NOM/ACC\_m\_inan> cara i[ego] m[ości] przez Witebsk prowadzono<NTF> miesionca bra dnia 19 na Łuki, prowadzono z Polski; Przysłano<NTF> z Połocka ukaz<ACC/NOM\_m\_inan>; Przysłano<NTF> ukaz<ACC/NOM\_m\_inan> z Mińska*; masculine plural animate NPs (4), cf. *a potom na Wołotowkach Zaruczayskich trzech<ACC/GEN\_pl\_anim> na pale powbiano<NTF> żywcem; a naszych<ACC/GEN\_pl\_anim> polakow z Mniszkowno z hańbo wypendzono<NTF>; y innych<ACC/GEN\_pl\_inan> rozsiekano<NTF>; Pisane wyrażaion sie tu ymiona y nazwiska osob tych, ktorych<ACC/GEN\_pl\_anim> pierwszy raz do nadaney miastu Witebskiemu magdeburij obierano<NTF>, do rady, w roku 1597, marca 17 dnia.*

NTF has also been attested with *a*-declension nouns in the NP (3), e.g. *Ciewiwke<ACC\_a-decl>, staroste witebskiego, a Harasima władkye<ACC\_a-decl> spalono<NTF> na Kamieniu żydowskim za zdrade roku 1415; Dubine<ACC\_a-decl> kozaka, wodza, y dwunastu starszych przyprowadzon<NTF>o zkowanych od krola; Władkye<ACC\_a-decl> zabito<NTF> w Witebsku 12 gbra, błogosławionego Iosefata*; as well as with non-*a*-declension in the NP (1), e.g. *Wybudowano<NTF> cerkiew<ACC/NOM\_non-a-decl> swientey Troycy Markowsko*. There are also *-no, -to* forms headed by geographicl names (1), cf. *Pokoy stanol z Moskwo y na Ewdokio rusko oddano<NTF>: Połock, Witebsk, Dzisne, Dunebork, Orsze y Mscisław.*

Beside, NTF have been attested with numeral phrase in the NP (8), forms syncretic between nominative and accusative, e.g. *Miesionca iuli 8 dnia woysko Rzeczy Pospolitey z i[ch] wie[l]moż[noś]ćmi panny pany Pocietami pod Donbrowno pobito<NTF> chłopstwa, przeciw im zebranego, 18 tysioncy siedymsett<NUM>; Miesionca rbra w doł prowadzono<NTF> 8000<NUM> dział, rydle i bardysze; Tudzież z Porzeczca prowadzono<NTF> w doł strugow z zapasami woionnemi 50<NUM>; Przyprowadzono z Połocka 7000<NUM> tysency kulow monki zytney y złożono<NTF> w puniach p[ana] Hałhuzy i Astachowicza; Wziento<NTF> z miasta Witebska y mieszczan na lanhofta szwedzkiego tallarow 6000<NUM> item znowu wziento z ratusza, burmistrzow y innych osob dwunastu y zaprowadzono do Ostrowna ktorych tam okupili mieszczanie, dawszy kaniterowi szwedzkiemu 1000 tallarow bittych całkowych; Długosz zas pisze, że tylko 6<NUM> worow temi uszami napakowano<NTF>; chorongwi wziento<NTF> 60<NUM>, dział 11; W ten czas w trupie tureckim znaleziono<NTF> 50<NUM>*

*czzerwonych złotych*<sup>125</sup>.

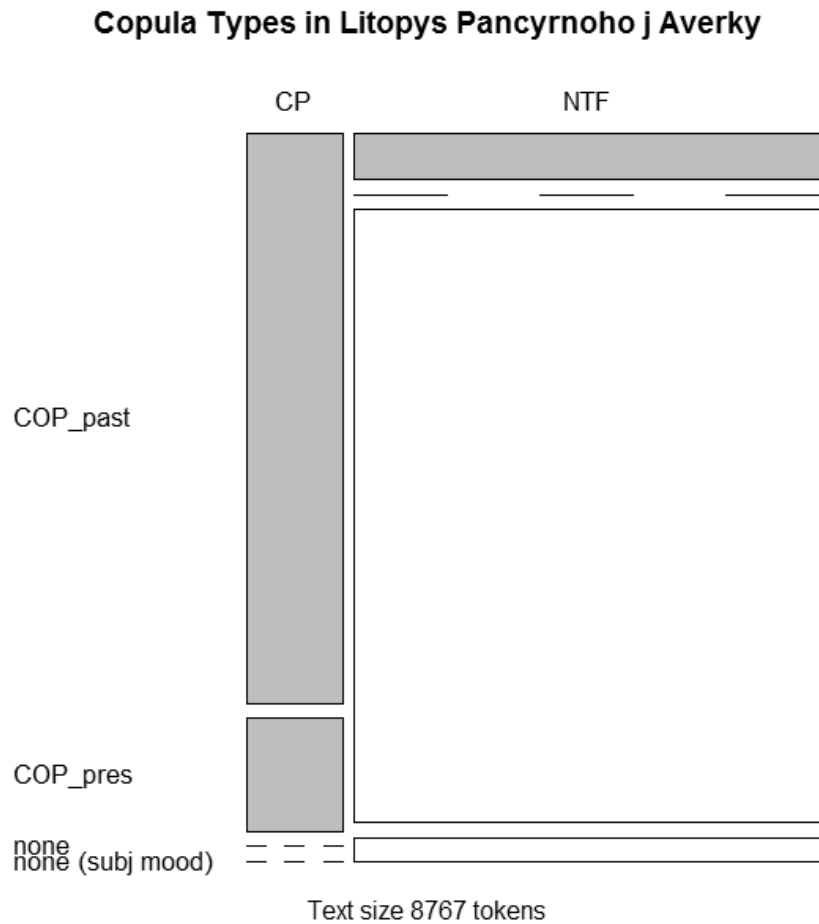
There are 2 past tense marking auxiliaries in the structure of *-no*, *-to* that seem to designate pluperfect, cf. *Iak to było<COP\_past> napisano<NTF>*, *tak y ia przepisałem tu*; *Wienksza cześć Wilno miasto wygorzało, ratusz, kromy, Swienty Kazimierz i co w sklepach było<COP\_past> замуrowano<NTF>*, *wszystko to potlało y poginelo*. The complementizer *aby* (1) does not trigger a copula into the subjunctive *-no*, *-to* predicates, cf. *Przysłano ukaz z Mińska, aby<C> koni dano<NTF> z tarify lubelskiey, ze trzech dymow*.

NTF co-occurs with agent expressions (3), in the form of *przez-PP* (1), cf. *Po te mieysce dzieie pisano<NTF> przez szlachetnie urodzonego i[ego] m[ości] pana Gabriela Kurilowicza Awierke<przez-PP>*, *burmistrza y wicelantwoyta witebskiego*; as well as in instrumental oblique (1), cf. *Żółkiewskiemu głowa ucienta, maioncemu lat 73, Koniecpolskiego poymano<NTF> tatarzy<INST>*; and in the form of *od-PP* (1), that however might designate a source, cf. *Dano<NTF> mu w posagu od xionżencia twerskiego<od-PP> Witebsk Olgerdowi*. Both CP and NTF in this chronicle are formed from both perfective and imperfective verbal stems, while NTF is also formed from iterative perfective verbal stems.

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<sup>125</sup>There are also several ambiguous records as well, cf. *Gotowo summe cara i[ego] m[ości] z chy, prowadzono na Borysow*; *Bo ten Giedymin poluiono po puszczy na tym mieyscu, gdzie Wilno stoy, zabił sztuki wielkiey straszneho żubra i w polowaniu swoym zanocował w puszczy na Łysej gorze*; *Witeblane, z moskwo utarczke maiono w Hłozowiczach*.

**Chart 6.5.3.a**

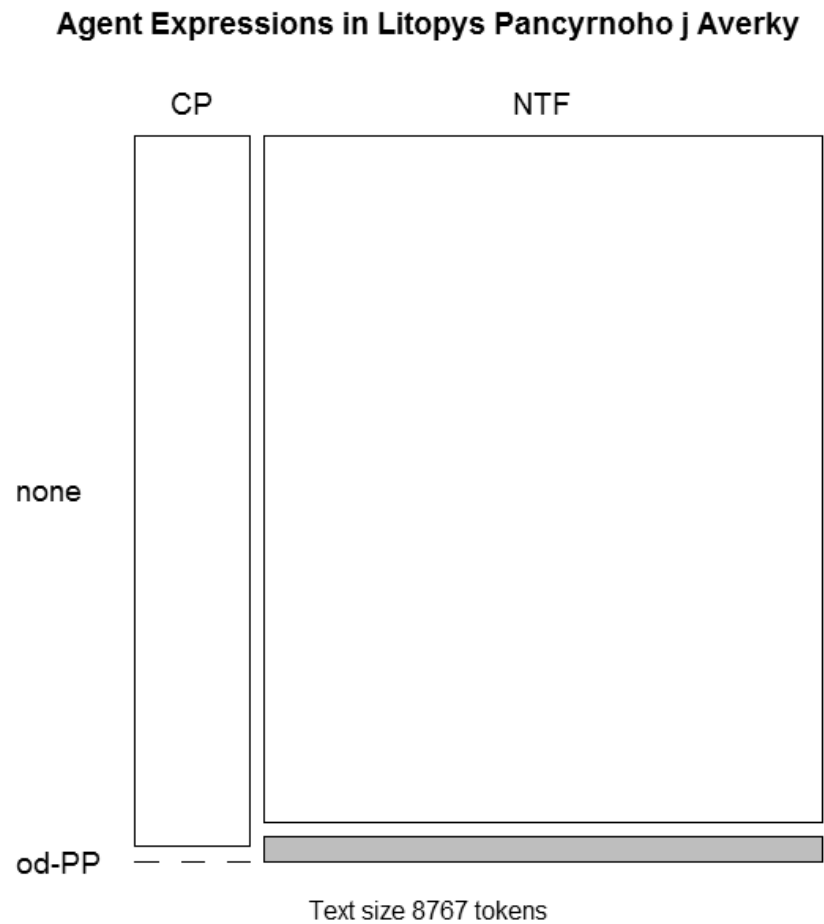


This data frame consists of 35 observations of 2 variables. The independent factor “copula” has 4 levels, cf. the table below:

	COP_past	COP_pres	none	none (subj mood)
CP and PPP5	1	0	0	
NTF	2	0	26	1

X-squared = 24.943, df = 3,  $p$ -value = 1.587e-05; Fisher's  $p$ -value = 3.019e-05.

**Chart 6.5.3.b**

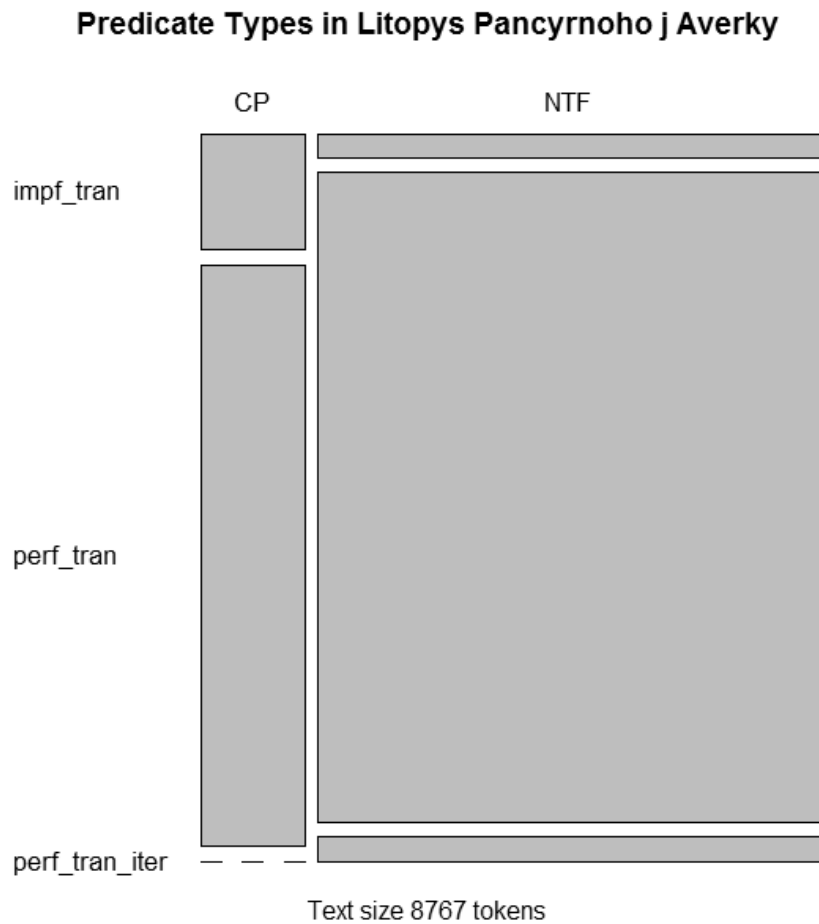


This data frame consists of 35 observations of 2 variables. The independent factor “agent” has 2 levels, cf. the table below:

	none	od-PP
CP and PPP6	0	
NTF	28	1

X-squared = 2.6823e-30, df = 1,  $p$ -value = 1; Fisher's  $p$ -value = 1.

**Chart 6.5.3.c**



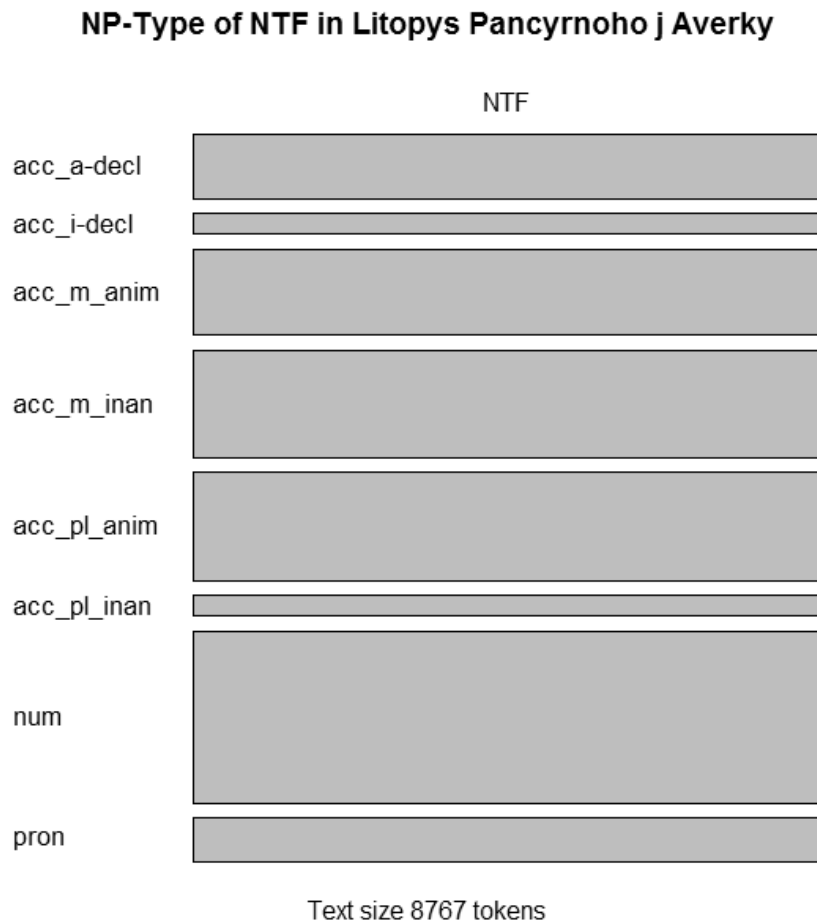
This data frame consists of 35 observations and 2 variables. The independent factor “predicate” has 3 levels, cf. the table below:

	impf_tran	perf_tran	perf_tran_iter
CP and PPP1	5	0	
NTF	1	27	1

X-squared = 1.7789, df = 2,  $p$ -value = 0.4109; Fisher's  $p$ -value = 0.4417.



**Chart 6.5.3.d**



The data frame for this sub-corpus consists of 29 observations of 2 variables. The independent factor “NP” has 8 levels, cf. the table below:

	acc_a-decl	acc_i-decl	acc_m_anim	acc_m_inan	acc_pl_anim
NTF	3	1	4	5	5
	acc_pl_inan	num	pron		
NTF	1	8	2		

X-squared = 11, df = 7, *p*-value = 0.1386.

### Regression Analysis 6.5.3.e

#### Litopys Pancyrnoho j Averky

#### Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type + Copula:Predicate\_type)

The significance level is set to 0,05, that is  $p\text{-value} < 0,05$  is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	35	LR chi2	24.43	R2	0.837	C	0.977
NTF	29	d.f.	5	g	4.999	Dxy	0.954
PPP and CP	6	Pr(> chi2)	0.0002	gr	148.315	gamma	1.000
max	deriv  0.001			gp	0.279	tau-a	0.279
				Brier	0.038		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	-9.8237	28.0684	-0.35	0.7263
Copula	10.5169	28.0812	0.37	0.7080
Subjunctive_mood	-0.0541	142.4165	0.00	0.9997
Agent	-10.5709	139.6259	-0.08	0.9397
Predicate_type	-0.0324	64.8201	0.00	0.9996
Copula * Predicate_type	10.6193	288.8396	0.04	0.9707

$p$ -values outside the model:

Copula: X-squared = 21.8, df = 2,  $p\text{-value} = 1.846\text{e-}05$ ; Fisher's  $p\text{-value} = 5.175\text{e-}05$ .

Subjunctive\_mood: X-squared = 2.6823e-30, df = 1,  $p\text{-value} = 1$ ; Fisher's  $p\text{-value} = 1$ .

Agent: X-squared = 2.6823e-30, df = 1,  $p\text{-value} = 1$ ; Fisher's  $p\text{-value} = 1$ .

Predicate\_type: X-squared = 1.7789, df = 2,  $p\text{-value} = 0.4109$ ; Fisher's  $p\text{-value} = 0.4417$ .

COMMENT:

The values of the coefficients  $R^2$ , C and Dxy are close to 1, so that the model's ability to predict as well as to fit the data approaches 100%. The  $p$ -values of factors and their interactions inside the model are close to 1, that is they are almost completely in line with the null hypothesis. The  $p$ -values for "Copula" in the normality tests indicate high significance of this factor.

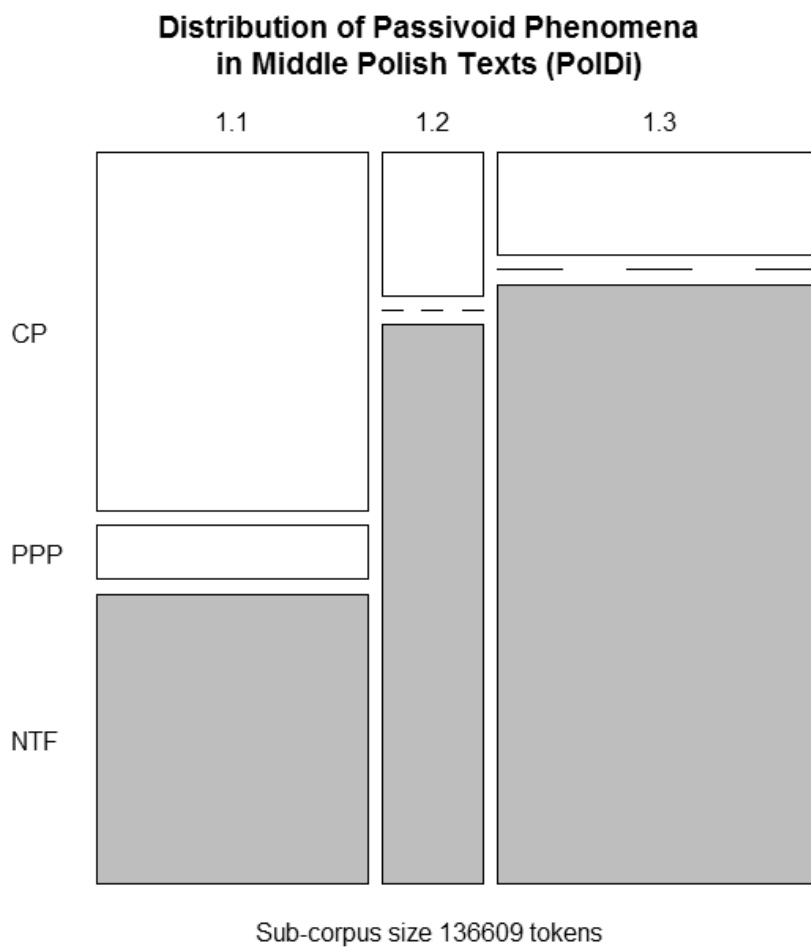
## 6.6. Summary

The Polish texts above that we label as contaminated do not have any records of participial passives, the only related phenomena being periphrastic passives and *-no*, *-to* predicates. In the 18<sup>th</sup> c. contaminated texts NTF records are considerably more frequent than CP records. Canonical passive construction is attested with *być*-copula in the present and in the past tense. There are two types of agent expressions attested in CP in these texts, namely *od*-PP and *przez*-PP. NTF co-occurs with agent expressions in the form of *przez*-PP, in the instrumental oblique, and in the shape of *od*-PP, which however can also designate a source. The *-no*, *-to* and *-ne*, *-te* desinence for neuter singular nouns in periphrastic passives are employed parallel. Contrary to the *-no*, *-to* manifestations in subjunctive mood in regular, that is non-contaminated Middle Polish texts, the complementizers *aby* or *żeby* do not trigger the appearance of any tense marking auxiliaries in the structure of *-no*, *-to* predicates in these chronicles. The overwhelming majority of *-no*, *-to* predicates introduced by the complementizer *aby* and *żeby* that have been attested in these texts do not have any auxiliaries in the structure. Few tense marking auxiliaries that have been attested in the structure of *-no*, *-to* predicates can all be agreeing participles, since they are headed by forms syncretic between nominative and accusative.

In our 16<sup>th</sup> c. text NTF records are more numerous than CP records as well. The majority of *-no*, *-to* records are headed by noun phrases syncretic between nominative and accusative. There are 2 *-no*, *-to* records co-occurring with the *być*-copula in the past tense, which however can be instances of agreeing passives. Canonical passive is attested with *zostać*-copula and *być*-copula in the past tense. CP in this early chronicle is attested with an agent in the shape of *od*-PP. The presence of complementizers in the structure of NTF in this text may or may not trigger the tense marking auxiliaries. There is nominative as object case attested in the structure of *-no*, *-to*. Both CP and NTF in the 18<sup>th</sup> c. texts have been formed from imperfective stems, while NTF has also been formed from iterative stems. In the 16<sup>th</sup> c. contaminated Polish text CP records are formed from perfective verbs exclusively. NTF is also formed from imperfectives.

## 6.7. Middle polish texts (PolDi) [136,609 tokens]

**Chart 6.7.a**



- 1.1 *Pamiętniki* by Janczar (1496-1501), 42,940 tokens
- 1.2 *Dworzanin* by Gornicki (1566), 43,203 tokens
- 1.3 *Pamiętniki* by Pasek (1659-1661), 50,466 tokens

### 6.7.1. Pamiętniki (Janczar), 1496-1501 [42,940 tokens]

CP and PPP (77) in this text outnumber NTF (56) records. CP (67) occurs predominantly with past copula (63), cf. *gdzie był<sub><COP\_past></sub> ociec jego Morat zabit*; *A jeśli by kto przeświadczon był<sub><COP\_past></sub>*; *pany, którzy byli<sub><COP\_past></sub> poimani*; *gdzie był<sub><COP\_past></sub> mur stłuczon*; *iż droga była<sub><COP\_past></sub> (PA końmi) zbrodzona*; *gdyż jeszcze Matyas nie był<sub><COP\_past></sub> koronowan*. CP is attested exclusively with short form passive past participles. There are several cases of CP used with present tense copula *jest* (4), cf. *a przy nich szabla Difalkari jest<sub><COP\_pres></sub> namalowana*; *aż zamek jest<sub><COP\_pres></sub> dokonan*; *a jeden pan Mikulasz Skobalik i z swym strykiem na koło jest<sub><COP\_pres></sub> wbit*; *tam jest<sub><COP\_pres></sub> zabit*. There is 1 record of *zostać*-passive, headed by a neuter singular noun phrase, cf. *A także Jajce zostało<sub><COP\_past\_pol></sub> niedobyte*. CP in this text co-occurs with od-PP (8), cf. *jen był wzięt od Turkow<sub><od-PP></sub>*; *Ludzie ci, którzy od Despota<sub><od-PP></sub> (KPA byli) wyprawieni*; *od którego<sub><od-PP></sub> był przestrzeżon*; *aby od nich<sub><od-PP></sub> nie byli potłoczeni*; *ktory byt wzięt od Turków<sub><od-PP></sub> y był Tanczarem*; *od których<sub><od-PP></sub> zasię porażeni byli*; *ktory lud kiedy nie był zwalczony od was<sub><od-PP></sub>*; *od Cesarza Tureckiego<sub><od-PP></sub> byli obdarzeni według ich zasłużenia*. There is also an agent expression in the shape of *przez-PP* (1), which, however, seems to designate the inter-mediator of the action, not its performer, cf. *Tenże Mikołaj Brzeski potym był wypuszczon z Wołoch przez dwu posłu<sub><przez-PP></sub> Krola Polskiego*. This early Middle Polish text still has records of PPP (10) used as aorist, that is as a mode of narration, cf. *Totem więc Cesarz Machomet umarł, jen pogrzebion<sub><PPP></sub> w Konstantynopolim*; *też o sobie głos puścił, że tam zabit<sub><PPP></sub>*.

NTF is attested with *a*-declension noun in the NP (7), cf. *Miał ci Machomet siostrę jedną, którą<sub><ACC\_a-decl></sub> zwano<sub><NTF></sub> Fatyna*; *I powiadają Pogany, gdy onę szablę<sub><ACC\_a-decl></sub> wrzucono<sub><NTF></sub>*; *abowiem tak kobiercy czystemi wszytkę podłogę<sub><ACC\_a-decl></sub> posiano<sub><NTF></sub>*; *Te krainę<sub><ACC\_a-decl></sub> zwano<sub><NTF></sub> Aliazy jako by białe pismo*; *głowę mu ściął i oddał ją Baszowi przedniejszemu, którą<sub><ACC\_a-decl></sub> po wojsku niesiono<sub><NTF></sub>*; *Potym posłano<sub><NTF></sub> ją<sub><ACC\_a-decl></sub> do drugiego wojska pod Budzin*. NTF also occurs with NPs syncretic between nominative and accusative, i.e. with neuter noun and pronouns in the NP (6), cf. *A ine wojsko<sub><ACC/NOM\_n\_sg></sub> wszytko (PA jego) na głowę porażono<sub><NTF></sub>*; *któremu to<sub><ACC/NOM\_pron></sub> było<sub><COP\_past\_ru></sub> poruczono<sub><NTF></sub>*; *i przyjechał Cesarz na ono miejsce, które<sub><ACC/NOM\_n\_sg></sub> (PA przed miastem) było<sub><COP\_past\_ru></sub> przyprowadzono<sub><NTF></sub>*; *książę pogańskie, które<sub><ACC/NOM\_n\_sg></sub> zwano<sub><NTF></sub> Karaman*; *a to<sub><ACC/NOM\_pron></sub> zapalono<sub><NTF></sub> w nocy*; *a naleziono<sub><NTF></sub> ono mleko<sub><ACC/NOM\_n\_sg></sub> w niem*; as well as with accusative-nominative animates and inan plural nouns that are also syncretic between

nominative and accusative forms (15), cf. *niżli by miano<NTF> żony nasze i dzieci<ACC/NOM\_pl\_anim> przed naszymi oczyma; aby jemu (PA one) więźnie<ACC/NOM\_pl\_anim>, (PA one) pany, którzy byli poimani, przepuszczono<NTF>; przywieziono<NTF> obadwa syny<ACC/NOM\_pl\_anim> ślepe; A tedy też wszystkie<ACC/NOM\_pl\_anim> w więzienie Cesarskie przypuszczono<NTF>; iż owszeki<ACC/NOM\_pl\_inan> naprawiono<NTF> na nie; Takci<ACC/NOM\_pl\_anim> Konstantynopolem dobyto<NTF>; na którym (PA wale) wszędy rożny gęste<ACC/NOM\_pl\_inan> otykano<NTF>; strzelnice<ACC/NOM\_pl\_inan> dla dział (PA uczyniono<NTF>); iżby<ACC/NOM\_pl\_inan> ich gdzie w jazdę zawołano<NTF>; aby konie<ACC/NOM\_pl\_anim>, wielbrądy i wszystek dobytek z pastew do wojska przypędzono<NTF>; za nim wieziono<NTF> bębny<ACC/NOM\_pl\_inan> wielkie i male; zamki<ACC/NOM\_pl\_inan> dwa główne wzięto<NTF>; zabił ludzi przez dwieście, więźniów, które<ACC/NOM\_pl\_anim> sprzedawano<NTF> na galiach tak z Czarnego jako i z Białego morza; w zamku też na bromie (!) działa<ACC/NOM\_pl\_inan> wytoczono<NTF> i broni<ACC/NOM\_pl\_inan> (!) otworzono<NTF>; a tam ulano<NTF> cztery działa burzące; as well as quantified expressions and numerical nouns in the NP (6), cf. *inych wiele<Q> znamienicie darowano<NTF>; wszystko<Q> wysieczono<NTF> oprócz dzieci a niewiast; wszystko<Q> mierziono<NTF> przed panem B (ogiem); tam Janczarów (PAM rannych) napisano<NTF> cztery sta i kilkoż<NUM>; A co oni uczynią (PA abo uradzą), to (PA będzie wszystko) uczyniono<NTF>; Ludzi chrześcijańskich wygnano<NTF> z Węgier i z tymi, co pobito, prze sto tysięcy<NUM>.**

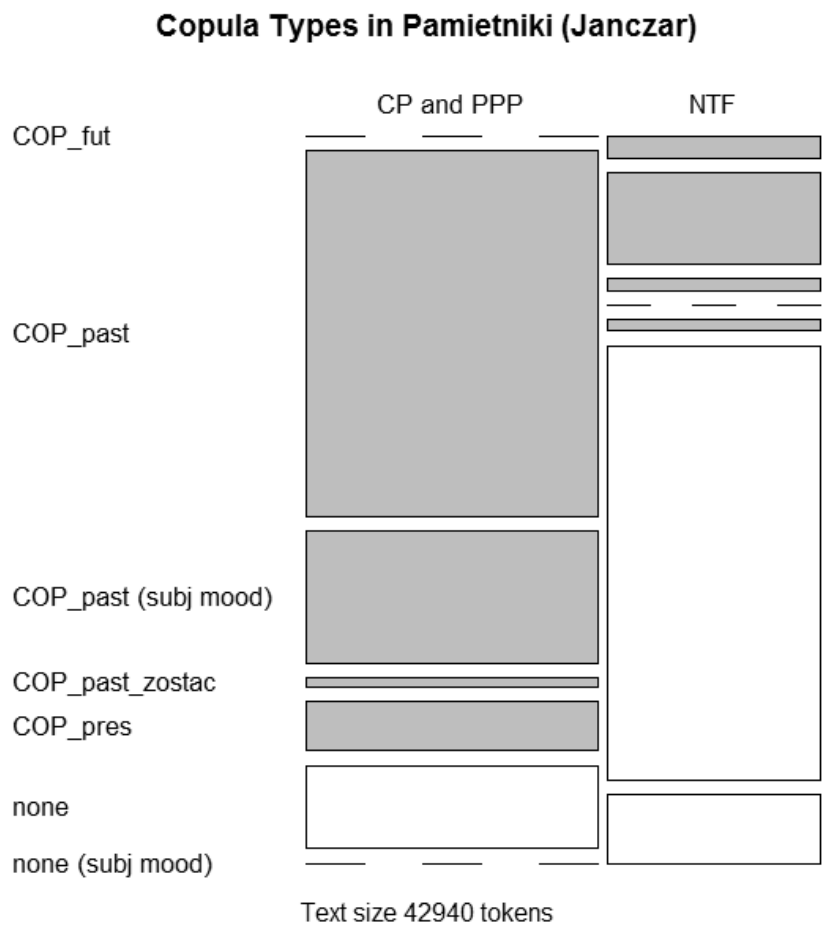
NTF is also attested with masc inanimates (3), forms syncretic between nominative and accusative, cf. *udziałano<NTF> przekop<NOM/ACC\_m\_inan> na górę; usypano<NTF> i wał<NOM/ACC\_m\_inan>; około przekopów wszędy usypano<NTF> wał<NOM/ACC\_m\_inan> na górę; as well as masc animate accusative-genitive forms (6), cf. *Tedy przywiedziono<NTF> przed Kana Bajzeta Cesarza<ACC/GEN\_m\_anim>; zwano<NTF> go<ACC/GEN\_m\_anim> Korffo; bo po ojcu tako go<ACC/GEN\_m\_anim> też zwano<NTF>; iż się jeden dziwował gdy drugiego<ACC/GEN\_m\_anim> dobywano<NTF>; Potem Cesarz Machomet przyciągnął ku Jajcu, przed którego<ACC/GEN\_m\_anim> Krola samowtorego przywiedziono<NTF>; aby go<ACC/GEN\_m\_anim> świebodnie przepuszczono<NTF>.* Additionally, NTF is attested with genitive of negation in the NP (1), cf. *aby mu wszystkich Janczarów<GEN\_pl\_anim> nie<NEG> pobito<NTF>.**

NTF in this text co-occurs with past copula (7), cf. *iż Cesarz Turecki przyciągnął ku Zofii, które było<COP\_past> spalono<NTF>; aby Turkom przymirze trzymano<NTF> było<COP\_past>; a (PA tedy) więc omieszkanio<NTF> było<COP\_past> dwie ćwierci lata (K żółd); A takż Konstantynopola dobywano<NTF> było<COP\_past> po suszy i po morzu; Jenczarzy Cesarscy zabili hetmana Greckiego, któremu to było<COP\_past> poruczono<NTF>; z tych, które (PA było<COP\_past>) przywiedziono<NTF>; W tej też radzie między onemi baszami zawiązano<NTF> było<COP\_past> jedno; as well as with future copula (1), cf. *żadnemu nic wydano<NTF> nie będzie<COP\_fut>.* Besides, NTF*

has been also attested with present tense copula (1), cf. *Toć też wszystko między niemi  
zrządzono*<sub><NTF></sub> *jest*<sub><COP\_pres></sub>.

NTF in this text co-occurs with od-PP (1), cf. *książę Tylskie zabito*<sub><NTF></sub> *od syna  
Jankułowego*<sub><od-PP></sub>. This record however can be an instance of canonical passive, since its NP  
is neuter.

Chart 6.7.1.a



This data frame consists of 133 observations of 2 variables. The independent factor “copula” has 7 levels.

	COP_fut	COP_past	COP_past (subj mood)	COP_past_zostac	COP_pres
CP and PPP	0	44	16	1	6
NTF	2	8	1	0	1

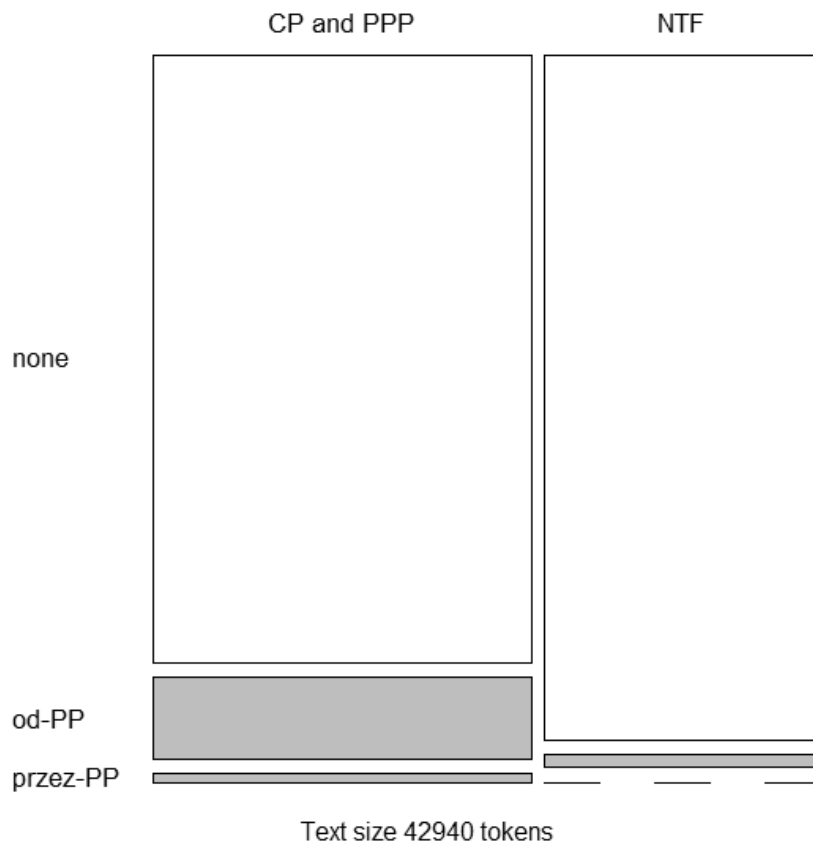
	none	none (subj mood)
CP and PPP	10	0
NTF	38	6

X-squared = 65.377, df = 6, *p*-value = 3.613e-12; Fisher's *p*-value = 1.337e-14.



# Chart 6.7.1.b

## Agent Expressions in Pamietniki (Janczar)

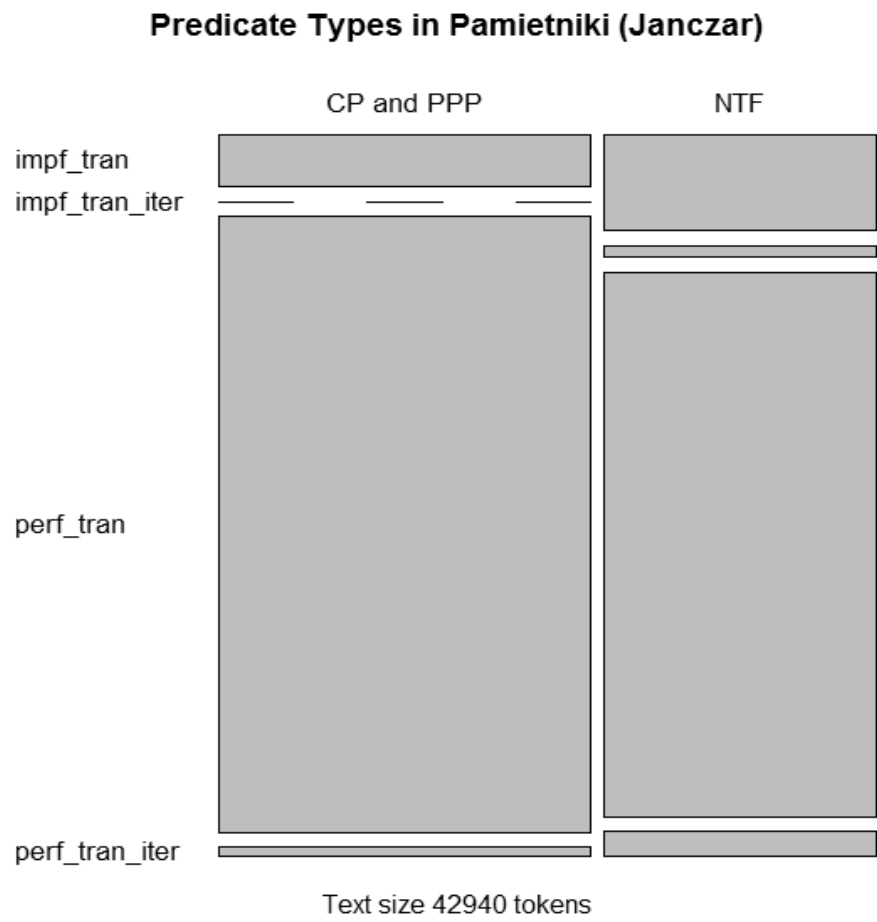


This data frame consists of 133 observations of 2 variables. The independent factor “agent” has 3 levels.

	none	od-PP	przez-PP
CP and PPP	67	9	1
NTF	55	1	0

X-squared = 5.3991, df = 2,  $p$ -value = 0.06723; Fisher's  $p$ -value = 0.04418

Chart 6.7.1.c

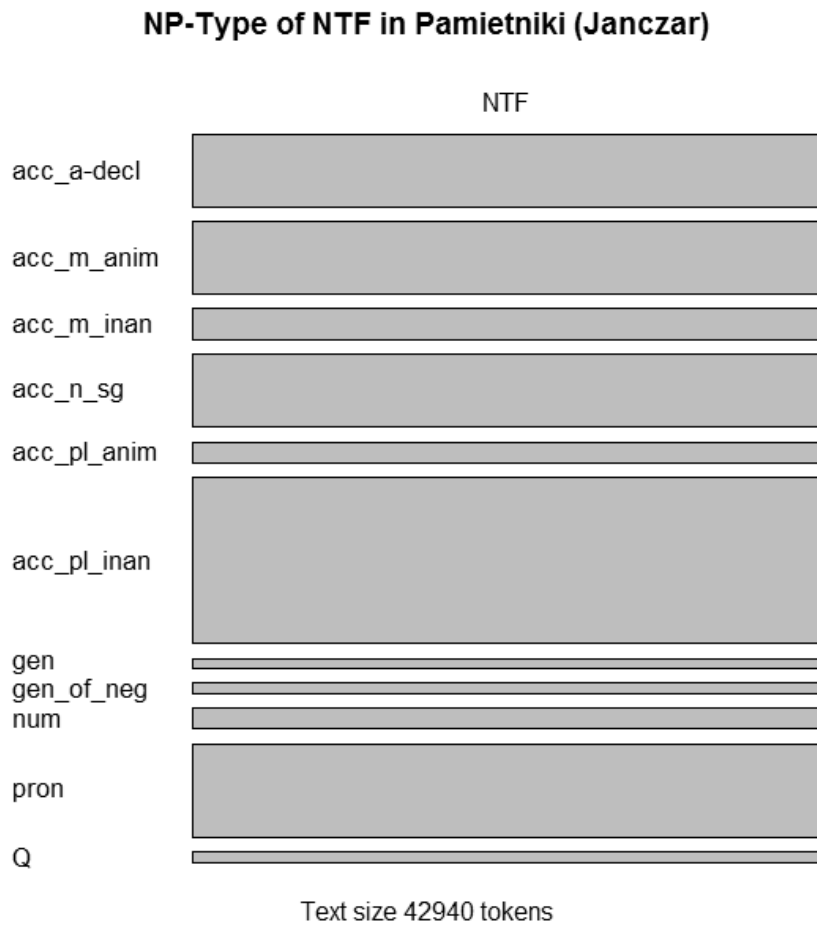


This data frame consists of 133 observations of 2 variables. The independent factor “predicate” has 4 levels.

	impf_tran	impf_tran_iter	perf_tran	perf_tran_iter
CP and PPP	6	0	70	1
NTF	8	1	45	2

X-squared = 3.8336, df = 3, *p*-value = 0.28; Fisher's *p*-value = 0.2311.

**Chart 6.7.1.d**



The data frame consists of 56 observations of 2 variables. The independent factor “NP” has 11 levels, cf. the table below:

	acc_a-decl	acc_m_anim	acc_m_inan	acc_n_sg	acc_pl_anim	acc_pl_inan
NTF	7	7	3	7	2	16
	gen	gen_of_neg	num	pron	Q	none
NTF	1	1	2	9	1	7

X-squared = 43, df = 10,  $p$ -value = 4.973e-06.

# Regression Analysis 6.7.1.e

## Pamiętniki (Janczar)

### Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type +  
Copula:Subjunctive\_mood + Copula:Agent + Copula:Predicate\_type +  
Subjunctive\_mood:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	133	LR chi2	63,8	R2	0,51	C	0,86
NTF	56	d.f.	8	g	5,2	Dxy	0,72
PPP and CP	77	Pr(> chi2)	<0.0001	gr	181,51	gamma	0,82
max	deriv 5e-04			gp	0,34	tau-a	0,36
				Brier	0,14		
		Coef	S.E.	Wald Z	Pr(> Z )		
Intercept		-0.5449	0.3223	-1.69	0.0908		
Copula		1.2528	0.3904	3.21	0.0013		
Subjunctive_mood		-9.5784	68.5005	-0.14	0.8888		
Agent		-9.7038	168.0763	-0.06	0.9540		
Predicate_type		-8.8411	40.8555	-0.22	0.8287		
Copula * Subjunctive_mood		11.3554	68.5078	0.17	0.8684		
Copula * Agent		18.8270	174.7192	0.11	0.9142		
Copula * Predicate_type		8.9743	40.8609	0.22	0.8233		
Subjunctive_mood * Predicate_type		7.8565	100.8385	0.08	0.9925		

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 63.953, df = 4,  $p$ -value = 4.275e-13; Fisher's  $p$ -value = 1.963e-15.

Subjunctive\_mood: X-squared = 1.0288, df = 1,  $p$ -value = 0.3104; Fisher's  $p$ -value = 0.2513.

Agent: X-squared = 5.3991, df = 2,  $p$ -value = 0.06723; Fisher's  $p$ -value = 0.04418.

Predicate\_type: X-squared = 3.8336, df = 3,  $p$ -value = 0.28; Fisher's  $p$ -value = 0.2311.

#### COMMENT:

The values of the coefficients C and Dxy indicate a good predictability of the dependent variable "NTF\_or\_PPP" via the independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood".  $R^2$  indicates that the model explains the variability of the observed data fairly well. Except the factor „Copula“ with its low  $p$ -value, all factors and their interactions have a vary high value testifying that the null hypothesis cannot be rejected. There are discrepancies between  $p$ -values within the regression model and in the normality tests, especially in the case of the factor „Agent“, which can even be considered significant according to the Fisher's test.

### 6.7.2. Dworzanin (Gornicki), 1566 [43,203 tokens]

NTF records (50) in this text clearly prevail over CP (10). NTF are attested with neuter noun or pronoun NPs syncretic between nominative and accusative, cf. *co*<Pron> *gdy im powiedano*<NTF> *tak; czas hnet i miejsce*<ACC/NOM\_n> *srankom naznaczono*<NTF>; *Kiedy ono*<NOM/ACC\_n> *zapowietrze po wzdętej bolące poznano*<NTF>; *Przeto ono, co*<Pron> *dawno powiedziano*<NTF>, *mało sie nie iści; Gdy na pierwsze wołanie nic*<Pron> *mu nic odpowiedziano*<NTF>; as well as with an *a*-declension noun in the NP, cf. *Panie Myszkowski, wielka to jest rzecz, którą*<ACC\_a-decl> *na w. m. włożono*<NTF>; *aby we trzech abo we czterech naszych miasteczkach mińce*<ACC\_a-decl> *bito*<NTF>; *gdy jej*<ACC\_a-decl> *pytano*<NTF> *na jednej biesiedzie; kiedy jej*<ACC\_a-decl> *w Krakowskich szkołach jawnie uczono*<NTF>; with masc sg animate NPs, cf. *aby go*<ACC/GEN\_m\_sg> *s tych fraszek, iż je dobrze czyni, chwalono*<NTF>; *aby go*<ACC/GEN\_m\_sg> *czczono*<NTF> *i miłowano*<NTF>; *przyniesiono*<NTF> *mu tegoż*<ACC/GEN\_m\_sg> *zaś; ale gdzieby go*<ACC/GEN\_m\_sg> *do czego powabiono*<NTF>; *iżby mu co jedno powie, wszystkiego*<ACC/GEN\_m\_sg> *wierzono*<NTF>; *a konia*<ACC/GEN\_m\_sg> *s nim ledwie ulapiono*<NTF>; *iżby go*<ACC/GEN\_m\_sg> *za hardego nie rozumiano*<NTF>; *A wszystko powiedział, kiedy go*<ACC/GEN\_m\_sg> *dojeżdżano*<NTF>; *gdy go*<ACC/GEN\_m\_sg> *też spytano*<NTF>; *kiedy kto te słowa, którei go*<ACC/GEN\_m\_sg> *dotkniono*<NTF>; *kiedy go*<ACC/GEN\_m\_sg> *pytano*<NTF>; *poimano*<NTF> *mnicha*<ACC/GEN\_m\_sg>; *i spytano*<NTF> *przszego*<ACC/GEN\_m\_sg>; *jako jednego*<ACC/GEN\_m\_sg> *pytano*<NTF>; *gdy jednego*<ACC/GEN\_m\_sg> *w wielkich przezyskach skazano*<NTF>; *kiedy niedźwiedzia*<ACC/GEN\_m\_sg> *psy trawiono*<NTF>; *iż go*<ACC/GEN\_m\_sg> *tym często drażniono*<NTF>; *A bodajże go*<ACC/GEN\_m\_sg> *zabito*<NTF>; *aby go*<ACC/GEN\_m\_sg> *hamowano*<NTF>; *prowadzi też metaphorę do końca, którą go*<ACC/GEN\_m\_sg> *potkano*<NTF>.

NTF is attested with plural inan NPs, forms syncretic between nominative and accusative, cf. *aby je*<ACC/NOM\_pl> *dworzany zwano*<NTF>; *kiedy mu sranki*<ACC/NOM\_pl\_inan> *w bernieńskim ziemskim sądzie skazano*<NTF>; *a iżby*<ACC/NOM\_pl\_inan> *ustawicznie i we dnie i w nocy robiono*<NTF>; *Bańki*<ACC/NOM\_pl\_inan> *mu to stawianov na niej m. księżę; że sie wasza K. M. pomścić możesz tych krzywd, które*<ACC/NOM\_pl> *waszej K. M. czyniono*<NTF> *na ten czas; as well as with accusative-genitive plurals animates and inanimates, cf. że mu wielkich*<ACC/GEN\_pl> *pienędzy pożyczono*<NTF>; *Bodajże ich*<ACC/GEN\_pl\_anim> *zabito*<NTF>; *Miły panie u dyabła wdy tak prędko tych powrozów*<ACC/GEN\_pl\_anim> *dostano*<NTF>.

NTF in this text co-occur with past ru copula, several exx we have analyzed suggested that the past tense marking auxiliaries occur to designate the pluperfect meaning, cf. ...*pomnię ja niedawno, kiedy tu na Prądnik przyniesiono*<NTF> *było*<COP\_past> *dwoje wiersze, jakoby miały*

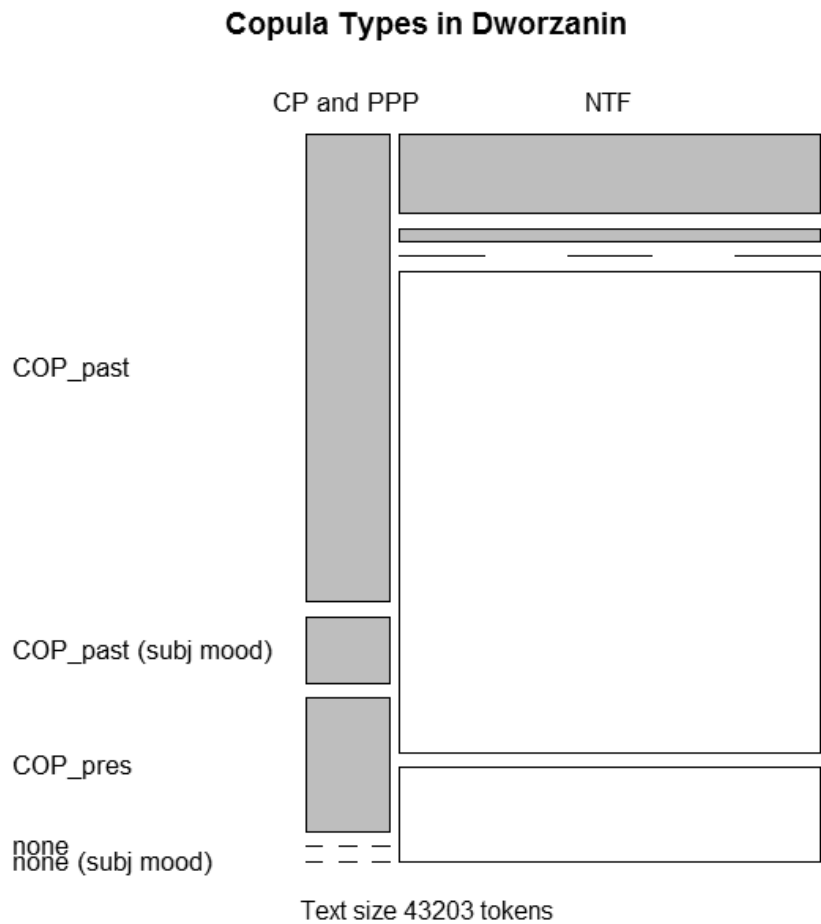
*być jedne pana Rejowe, a drugie pana Jana Kochanowskiego; aż go za koń było<COP\_past> wysadzono<NTF>; Jako gdy jednego czasu Królowi J. M. przywiedziono<NTF> było<COP\_past> z Niemiec niemało pięknych frezów wronych, Król J. M. patrząc na nic z okna, radził sie s panem Koniuszym a s panem Oboźnym, coby za rząd dać na nie miał.; I wierzę, że i tam tego rzymskiego od szczypania Scipionem było<COP\_past> nazwano<NTF>; Ha Pukarzewski przyjacielu, przesiedzieć mi twego wina, a by cie było<COP\_past> pirwej w sztuki ssiekano<NTF>, niżem ja do twej gospody iść pomyślił; A gdy zasię do wspomniania gonitwy jakiej przydzie, hnet sie s tym wyrwie, jako raz goniąc na ostre przed królem Lodwikiem, aż go za koń było<COP\_past> wysadzono<NTF>; Skotnicki mimo strach, którym go dobrze było<COP\_past> nakarmiono<NTF>, jeszcze sie długo wstydzić musiał, gdy to ten, to ów łańcuch, a pęta wspominał. NTF is attested with genitive of negation as well (2): *aby pana ich u sądu nie zdano<NTF>; a czasem chocia go i nie obrano<NTF>; czego mu nie mówiono<NTF>;* NTF also occurs with personal pronoun in the NP, cf. *spieszcie się, daj was zabito<NTF>; dajcie zabito<NTF>; bodaj cię zabito<NTF>.**

The ex below suggests that already in 1566 the copula *było* occurred in morphologically unambiguous *-no*, *-to* predicates with direct object complements to designate pluperfect meaning, cf. *A drugi, tez ksiądz, a jeszcze ktemu opat, będąc przy tym, kiedy Księżę urbinskie radziło sie, coby s tą ziemią czynić miał, którą<ACC\_a-decl> było<COP\_past> wykopano<NTF> zakładając fundament pod pałac urbinski.*

There is desinence *-ne*, *-te* used parallel to *-no*, *-to* with neuter singular head nouns, cf. *I tak panie Bojanowski zda sie to w m. male brzemię, które jest na mię włożone<AGR>.* The subjunctive *-no*, *-to* predicates that co-occur with the complementizer *iżby*, *by*, and *aby* do not trigger the tense marking auxiliaries into the structure of *-no*, *-to*, cf. *aby<C> go s tych fraszek, iż je dobrze czyni, chwalono<NTF>; aby<C> sie do nich, jako do bogów jakich o rade ubiegano<NTF>; Ktemu będzieli chciał, aby<C> go czczono<NTF> i miłowano<NTF>; ale gdzieby<C> go do czego powabiono<NTF>; iżby<C> mu co jedno powie, wszystkiego wierzone<NTF>; przed sie nie są tego godni, aby<C> je dworzany zwano<NTF>; żeby<C> sie był w czas wymówić mógł, iżby<C> go za hardego nie rozumiano<NTF>; Roskazać hnet, aby<C> we trzech abo we czterech naszych miasteczkach mińcę bito<NTF>, nie inaczej, jedno jako w samej Florencyje, a iżby<C> ustawicznie i we dnie i w nocy robiono<NTF>, a nic inego, jedno wszystko czerwone złote; którzy tego pilnowali tuż przy Woźnym stojąc, aby<C> pana ich u sądu nie zdano<NTF>; chcąc koniecznie, żeby<C> mu wierzone<NTF>; Więc też i to foremny żart, kiedy kto dla tego, aby<C> go hamowano<NTF>.* The *-no*, *-to* forms in subjunctive mood that operate on reflexive verbs do not trigger tense marking auxiliaries either, cf. *a teraz barzoby<C> sie s tego śmiano<NTF>; aby<C>*

*sie do nich, jako do bogów jakich o rade ubiegano<NTF>; aby<C> sie im dziwowano<NTF>;  
godniejsza tego była, aby<C> sie o nie starano<NTF>.*

Chart 6.7.2.a

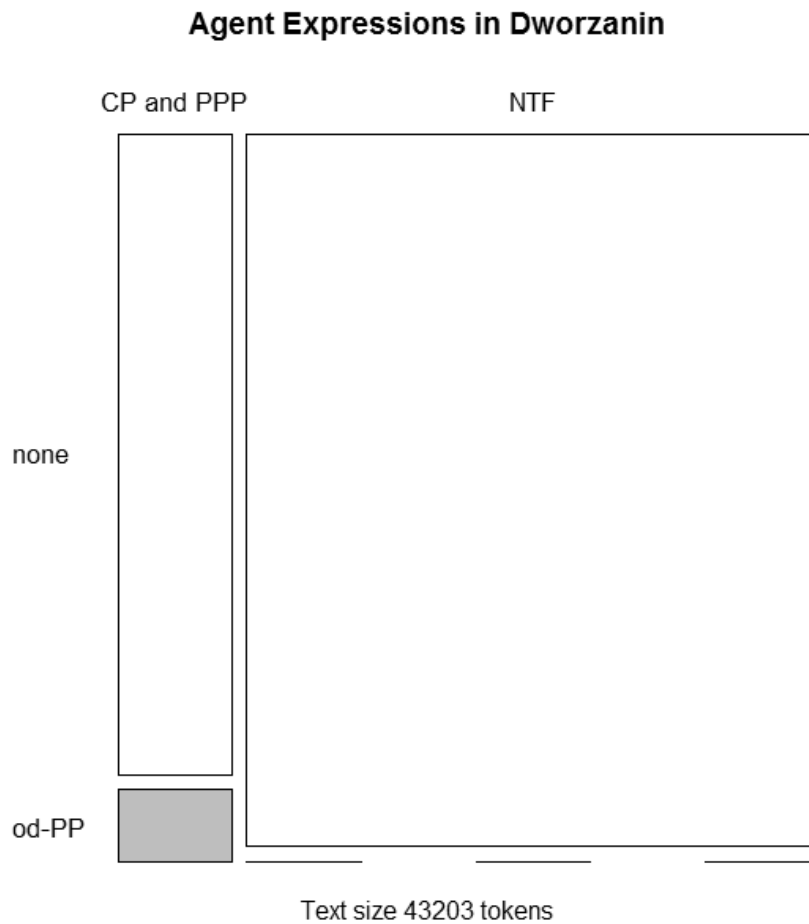


This data frame consists of 60 observations of 2 variables. The independent factor “copula” has 5 levels, cf. the table below:

	COP_past	COP_past (subj mood)	COP_pres	none	none (subj mood)
CP and PPP	7	1	2	0	0
NTF	6	1	0	36	7

X-squared = 33.138, df = 4, *p*-value = 1.119e-06; Fisher's *p*-value = 5.825e-07.

**Chart 6.7.2.b**



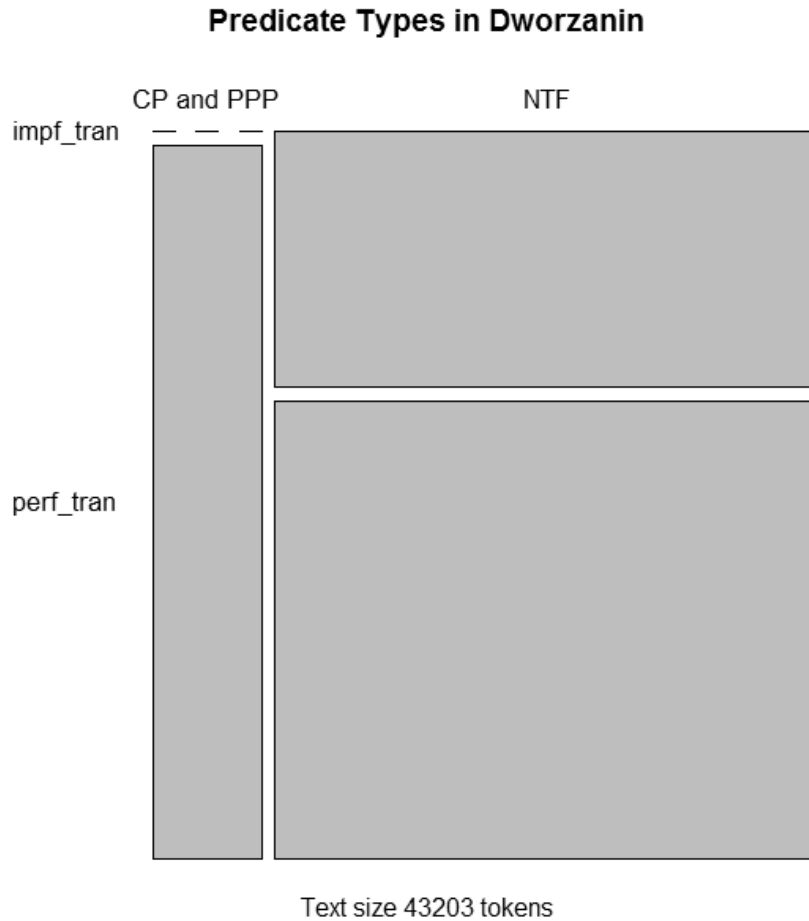
This data frame consists of 60 observations of 2 variables. The independent factor “agent” has 2 levels, cf. the table below:

	none	od-PP
CP and PPP	9	1
NTF	50	0

X-squared = 0.81356, df = 1,  $p$ -value = 0.3671; Fisher's  $p$ -value = 0.1667.



**Chart 6.7.2.c**

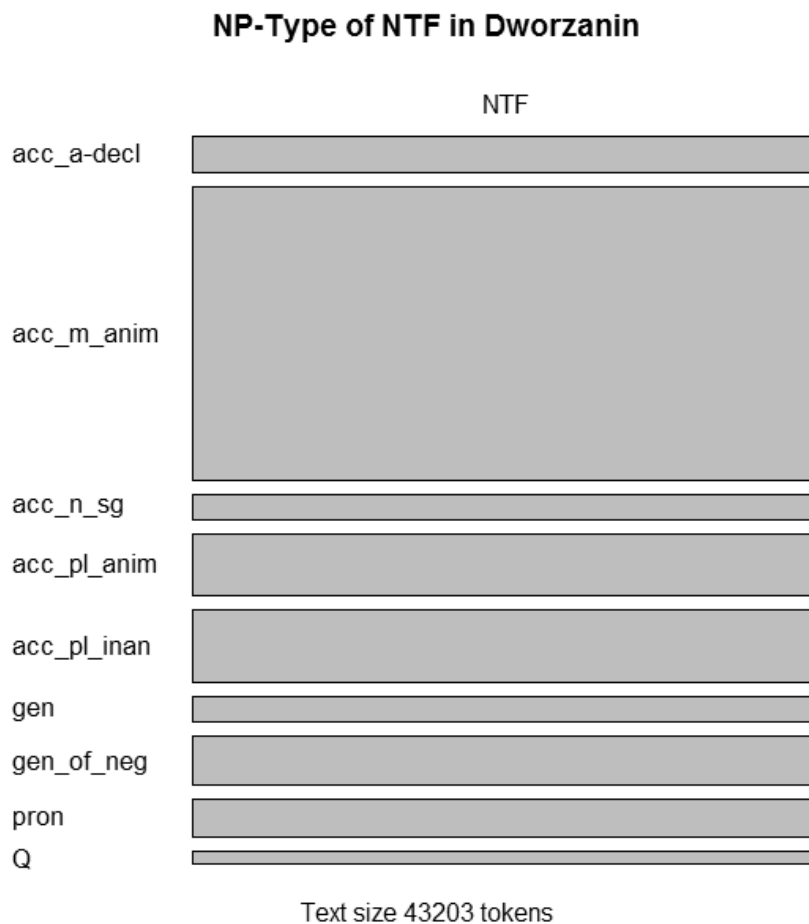


This data frame consists of 60 observations of 2 variables. The independent factor “predicate” has 2 levels, cf. the table below:

	impf_tran	perf_tran
CP and PPP	10	0
NTF	18	32

X-squared = 3.5714, df = 1,  $p$ -value = 0.05878; Fisher's  $p$ -value = 0.02489

**Chart 6.7.2.d**



The data frame consists of 50 observations of 2 variables. The independent factor “NP” has 9 levels, cf. the table with absolute values below:

	acc_a-decl	acc_m_anim	acc_n_sg	acc_pl_anim	acc_pl_inan
NTF3	24	2	5	6	
	gen	gen_of_neg	pron	Q	
NTF2	4	3	1		

X-squared = 72.4, df = 8, *p*-value = 1.633e-12.

# Regression Analysis 6.7.2.e

## Dworzanin

### Logistic Regression Model

lrm(formula = NTF\_or\_CP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type + Copula:Subjunctive\_mood)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	60	LR chi2	34.65	R2	0.739	C	0.951
NTF	50	d.f.	6	g	5.108	Dxy	0.902
CP	10	Pr(> chi2)	<0.0001	gr	165.304	gamma	1.000
max  deriv  0.002				gp	0.255	tau-a	0.255
				Brier	0.058		

	Coef	S.E.	Wald Z	Pr(> Z )
Intercept	-9.9221	27.5716	-0.36	0.7189
Copula	9.9221	27.5758	0.36	0.7190
Subjunctive_mood	0.0040	63.5105	0.00	0.9999
Agent	11.4100	300.3767	0.04	0.9697
Predicate_type	0.0184	47.1214	0.00	0.9997
Copula * Subjunctive_mood	-0.0040	63.5287	0.00	0.9999

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 33.12, df = 2,  $p$ -value = 6.428e-08; Fisher's  $p$ -value = 1.252e-07.

Subjunctive\_mood: X-squared = 0, df = 1,  $p$ -value = 1; Fisher's  $p$ -value = 1.

Agent: X-squared = 0.81356, df = 1,  $p$ -value = 0.3671; Fisher's  $p$ -value = 0.1667.

Predicate\_type: X-squared = 3.5714, df = 1,  $p$ -value = 0.05878; Fisher's  $p$ -value = 0.02489.

COMMENT:

The values of the coefficients  $R^2$ , C and Dxy indicate a very good predictability of the dependent variable "NTF\_or\_PPP" from the independent variables "Copula", "Agent", "Predicate\_type" and "Subjunctive\_mood" and also the fact that the model explains much of the data variability. The  $p$ -values of factors and their interactions are too high to be related within this regression model. The normality tests indicate the significance of the factor "Predicate\_type" and an extremely high significance of the factor "Copula".

### 6.7.3. Pamiętniki (Pasek), 1659-1661 [50,466 tokens]

NTF (134) records in this mid-17<sup>th</sup> c. text are notoriously more numerous than CP (18). Records of PPP as aorist have not been attested in this text. NTF is attested with an *a*-declension noun in the NP(17), cf. *i tymi ludźmi osadzono<NTF> fortece<ACC\_a-decl>; choć ją<ACC\_a-decl> ustawicznie wylewano<NTF>; armatę<ACC\_a-decl> sprowadzono<NTF>; wyprowadzono<NTF> i pannę<ACC\_a-decl>, zwyczajnie tak jak do szluby ubraną; Naznaczono<NTF> wojsku naszemu na konsystencyją zimową Wielką Polskę i Warmiją<ACC\_a-decl>; obudwu<ACC\_a-decl> porąbano<NTF> i rapierami pokłuto<NTF>; Chorągiew moskiewską<ACC\_a-decl>, bardzo okrytą<ACC\_a-decl>, zagarniono<NTF>; sarnę starszyzną<ACC\_a-decl> cięto<NTF> wtenczas; Komendę<ACC\_a-decl> dano<NTF> Borzęckiemu Pawłowi; w które wprowadzono<NTF> piechotę<ACC\_a-decl> i działka; Temu na progu szyję<ACC\_a-decl> ucinano<NTF>; Nazajutrz naznaczono<NTF> konsystencyje<ACC\_a-decl>; ekonomije<ACC\_a-decl> podzielono<NTF> między wojsko; w najpierwszym kole tę materiją<ACC\_a-decl> wniesiono<NTF>; sukienkę<ACC\_a-decl> proditiōnis obleczono<NTF>; żeby tę sukienkę<ACC\_a-decl>, którą na mnie, muszę rzec, in superlativo publicissime przykrojono<NTF>; do gospody dano<NTF> beczkę<ACC\_a-decl> miodu etc; as well as neuter nouns and pronouns in the NP, cf. *Nazajutrz otrąbiono<NTF> za trzy dni ruszenie<ACC/NOM\_n>; choć im o to nic<ACC/NOM\_n> nie mówiono<NTF>; to<ACC/NOM\_n> nazwano<NTF> hulajgorod; który tego urzędu, co<ACC/NOM\_n> mnie częstowano<NTF>; Ale mi to<ACC/NOM\_n> aż po czasie powiedziano<NTF>.**

NTF has also been attested with a quantifier and numeral nouns in the NP, cf. *Dano<NTF> mi tedy czeladzi kilkanaście<Q>; coś niewiele<Q> z niego ludzi [u]ratowano<NTF>; u trzeciego utracono<NTF> maszty dwa<NUM>; za rozkazaniem króla duńskiego 500<NUM> okrętów olenderskich zamknięto<NTF> in mań Baltico; że naznaczono<NTF> Piaseczyńskiego z półtora tysięcy<Q> ludzi; Więźniów kilku<NUM> posłano<NTF> królowi; zabito<NTF> dwadzieścia towarzystwa i czeladzi ze czterdzieści<Q>; i głuchych gwałt<Q> narobiono<NTF>; Chorągwi nabrano<NTF> kilka<Q> wozów; armaty wzięto<NTF> szumnej siła<Q> i więźniów też po trosze; na ostatku piechoty pobrano<NTF> z kilkaset<Q>; with accusative-nominative plural forms, designating both animates and inanimates, cf., *i odtąd talary<ACC/NOM\_pl\_inan> w wojsku nazywano<NTF> interpretes; porozwieszano<NTF> suknie<ACC/NOM\_pl\_inan>; i dlatego okręty<ACC/NOM\_pl\_inan> przysłano<NTF> bez żołnierzów; poosadzano<NTF> oweż okręty<ACC/NOM\_pl\_inan> według potrzeby; miasta<ACC/NOM\_pl\_inan> i wsi porabowano<NTF>; I dlatego żeby widziano<NTF> podwiązki<ACC/NOM\_pl\_inan>; które parafie<ACC/NOM\_pl\_inan> dano<NTF> nam w przysta[w]stwo; bo mi i wozy<ACC/NOM\_pl\_inan> naładowano<NTF> takimi specyjalami, jakich nie w obozie; które<ACC/NOM\_pl\_inan> ode mnie słyszano<NTF>; a zaś. pana Wojnowskiego poczet i**

*zasługi<ACC/NOM\_pl\_inan> żonie odesłano<NTF>; żeby zaraz stada<ACC/NOM\_pl\_inan> sprowadzano<NTF>; drabiny<ACC/NOM\_pl\_inan> i insze rekwizyta zwożono<NTF>; Zostawiono<NTF>, prawda, na te nasze chorągwie kwatery<ACC/NOM\_pl\_inan> i przydano<NTF> wartę; Uszykowano<NTF> tedy wojsko tak; ale już chorągwie<ACC/NOM\_pl\_inan> husarskie, których było dziewięć, rozdzielano<NTF>; co pod nimi konie<ACC/NOM\_pl> popostrzelano<NTF>; którym miejscem szyki<ACC/NOM\_pl\_inan> wyprowadzono<NTF> w pole; któremu potem od Moskwy posłano<NTF> ukazy<ACC/NOM\_pl\_inan>; honory<ACC/NOM\_pl\_inan> dawano<NTF>; rozdano<NTF> kwatery<ACC/NOM\_pl\_inan>; Tam e contra dawano<NTF> także rationes<ACC/NOM\_pl\_inan>; Poodbierano<NTF> tedy starostwa<ACC/NOM\_pl\_inan>, tenuty.*

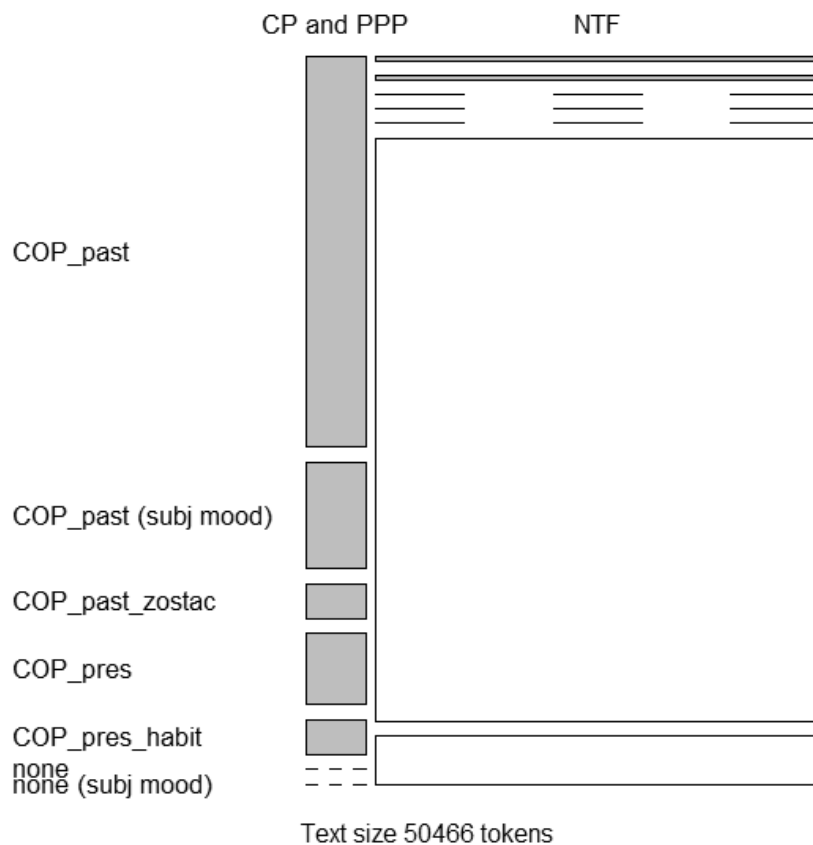
Besides, NTF frequently co-occurs with new accusative-genitive singular and plural forms, usually designating animates, less frequently inanimates, cf. *to go<ACC/GEN\_m\_anim> między dwóch dobrych mieszano<NTF>; jako go<ACC/GEN\_m\_anim> tam witano<NTF>; Ale przecie pszennego<ACC/GEN\_m\_anim> lubo żytnego<ACC/GEN\_m\_anim> dostawano<NTF> mi; posprowadzano<NTF> doktorów<ACC/GEN\_pl\_anim> różnych; odwieziono<NTF> go<ACC/GEN\_m\_anim> do bulwarka; tak żeby było wszystkich<ACC/GEN\_pl\_anim> wyduszono<NTF> i nikt by nie uszedł; bo go<ACC/GEN\_m\_anim> z działa postrzelono<NTF>; kosztów<ACC/GEN\_pl\_inan> nasprowadzano<NTF>; wyprawiono<NTF> tegoż to Wolskiego<ACC/GEN\_m\_anim> z listem; kiedy go<ACC/GEN\_m\_anim> z listami zatrzymano<NTF>; Szwedów<ACC/GEN\_pl\_anim> wycięto<NTF>; bo ich<ACC/GEN\_pl\_anim> zastano<NTF> in armis; jakby dopiero trzeci dzień stamtąd zakonników<ACC/GEN\_pl\_anim> wygnano<NTF>; Niesiono<NTF> na noszach chorego<ACC/GEN\_m\_anim> towarzysza; Dano<NTF> nam tedy natenczas zasług<ACC/GEN\_pl\_inan> ze skarbu za dwie tylko ćwierci; Bo też to zaraz nad miastem ta wieś i dawano<NTF> wszystkiego<ACC/GEN\_m\_inan> dla czeladzi i koni; jeżeli przedtem nazywano<NTF> go<ACC/GEN\_m\_anim> sokołem; jeszcze go<ACC/GEN\_m\_anim> surowie sądzono<NTF>; Potem wyprawiono<NTF> Skrzetuskiego<ACC/GEN\_m\_anim> na podjazd z komenderowanymi ludźmi; nikogo<ACC/GEN\_m\_anim> żywcem nie puszczono<NTF>; co go<ACC/GEN\_m\_anim> zwano<NTF> „Odlewany”; jakich<ACC/GEN\_pl\_anim> natenczas zażywano<NTF>; i rażono<NTF> naszych<ACC/GEN\_pl\_anim>; pode mną konia<ACC/GEN\_m\_anim> gniadego postrzelono<NTF> w pierś; albo go<ACC/GEN\_m\_anim> zabito<NTF>; co ich<ACC/GEN\_pl\_anim> na nas obrócono<NTF>; i ruszono<NTF> ich<ACC/GEN\_pl\_anim> 'jako stado sarn; Otoczono<NTF> ich<ACC/GEN\_pl\_anim> tedy dokoła armatą; a potem jak ich<ACC/GEN\_pl\_anim> to zdebilitowano<NTF> z armaty; zaraz go<ACC/GEN\_m\_anim> postrzelono<NTF> pod łopatkę; Nabrano<NTF> tedy tego<ACC/GEN\_m\_anim> jak bydła; grotów też z miast przywieziono<NTF>; których<ACC/GEN\_pl\_anim> nie zaraz oddano<NTF>; Chwycono<NTF> się tego<ACC/GEN\_m\_anim> zaraz; Kazano<NTF> pana pisarza<ACC/GEN\_m\_anim> w kajdankach do wahu; nazajutrz zabito<NTF> rotmistrza<ACC/GEN\_m\_anim>; Złapawszy, już kogo, boków<ACC/GEN\_pl\_inan> przypieczono<NTF>; Przyłączono<NTF> tedy luźnych<ACC/GEN\_pl\_anim> do wolentarzów i uszykowano<NTF> ich<ACC/GEN\_pl\_anim> za górą; że*

*go<ACC/GEN\_m\_anim> postrzelono<NTF>; Pod Woyniłowiczem konia<ACC/GEN\_m\_anim> zabito<NTF>; a pode mną konia<ACC/GEN\_m\_anim> postrzelono<NTF>; żeby ich<ACC/GEN\_pl\_anim> odstrzeliwano<NTF>; rozerwano<NTF> ich<ACC/GEN\_pl\_anim>; że Waszeci brata<ACC/GEN\_m\_anim> obuchem uderzono<NTF>; żeby ich<ACC/GEN\_pl\_anim> przymuszono<NTF>; okrzykniono<NTF> go<ACC/GEN\_m\_anim> zaraz; prawem nie przekonanego<ACC/GEN\_m\_anim> wzięto<NTF>, inkarcerowano<NTF>; niżeliby posprowadzano<NTF> senatorów<ACC/GEN\_pl\_anim> różnie po mieście stojących; with masc sg inanimates, syncretic in form between nominative and accusative, cf. Drugi okręt<ACC/NOM\_m\_inan> szwedzki przebito<NTF>; kiedy mi zbudowano<NTF> chłodnik<ACC/NOM\_m\_inan>; Posłano<NTF> tedy zaraz ordynans<ACC/NOM\_m\_inan> do Muraszki; ale kiedy jako posłowi ten dyshonor<ACC/NOM\_m\_inan> uczyniono<NTF>.*

Numerous are also NTF records with personal pronouns in the NP, cf. *a mnie<ACC/GEN\_pron> też tymczasem z tamtego miejsca sprowadzono<NTF>; gdzie się mnie<ACC/GEN\_pron> na zimę spodziewano<NTF>; zaczęliśmy tamże w Mosinach, gdzie lubo nas<ACC/GEN\_pron\_pl> postawiono<NTF> było na całą zimę po tak ciężkich pracach i tak dalekiej za Bałtyckie Morze ekspedycyje; Mnie<ACC/GEN\_pron> tedy deputowano<NTF> z panem Wawrzyńcem Rudzińskim; Przyjęto<NTF> nas<ACC/GEN\_pron\_pl> z chęcią nemine reclamante; zawsze mię<ACC/GEN\_pron> wybito<NTF>; „Bodejże was<ACC/GEN\_pron\_pl> tam i z rotmistrzem w pierwszej okazji pozabijano<NTF>!”; kiedy mię<ACC/GEN\_pron> jak do Rzymu afrykańskiego [jeńca] na tryumf wprowadzono<NTF>; jako mię<ACC/GEN\_pron> udano<NTF>; Po północy obesłano<NTF> nas<ACC/GEN\_pron\_pl>; Dopieroż mię<ACC/GEN\_pron> zawołano<NTF>.* There is also genitive of negation attested in the structure of NTF, cf. *Grenlandyja ma tak wiele ryb, że gdyby ich<GEN> nie<NEG> wylławiano<NTF>; żeby ich nie<NEG> rabowano<NTF>; A ciebie<GEN> czemu nie<NEG> zabito<NTF>; że go<GEN> przecie nie<NEG> sądzono<NTF>; as well as with genitive and partitive genitive, cf. Dawano<NTF> do nich ognia<GEN> z dział; nie słuchano<NTF> tego<GEN>; żeby ich<GEN> tam nie pognieciono<NTF>; nie widziano<NTF> mię<GEN> nigdy za szeregiem; żeby mię<GEN> z pocztu nie wypuszczano<NTF>; tylego szacunku<GEN> upominano<NTF> i musiało tak być; gdyż blisko granice moskiewskiej jedne by[d]ła<GEN> pozabierano<NTF>.*

**Chart 6.7.3.a**

**Copula Types in Pamietniki (Pasek)**



This data frame consists of 152 observations of 2 variables. The independent factor “copula” has 7 levels, cf. the table below:

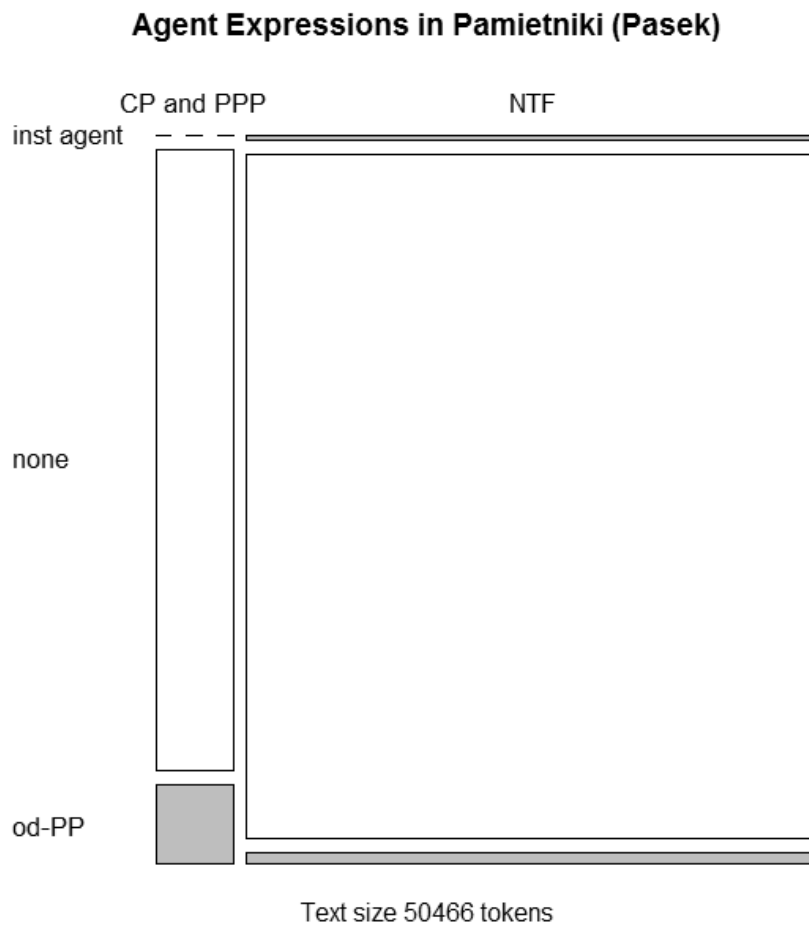
	COP_past	COP_past (subj mood)	COP_past_zostac	COP_pres
CP and PPP	11	3	1	2
NTF	1	1	0	0

	COP_pres_habit	none	none (subj mood)
CP and PPP	1	0	0
NTF	0	122	10

X-squared = 136.04, df = 6,  $p$ -value < 2.2e-16; Fisher's  $p$ -value < 2.2e-16..

**Chart 6.7.3.b**



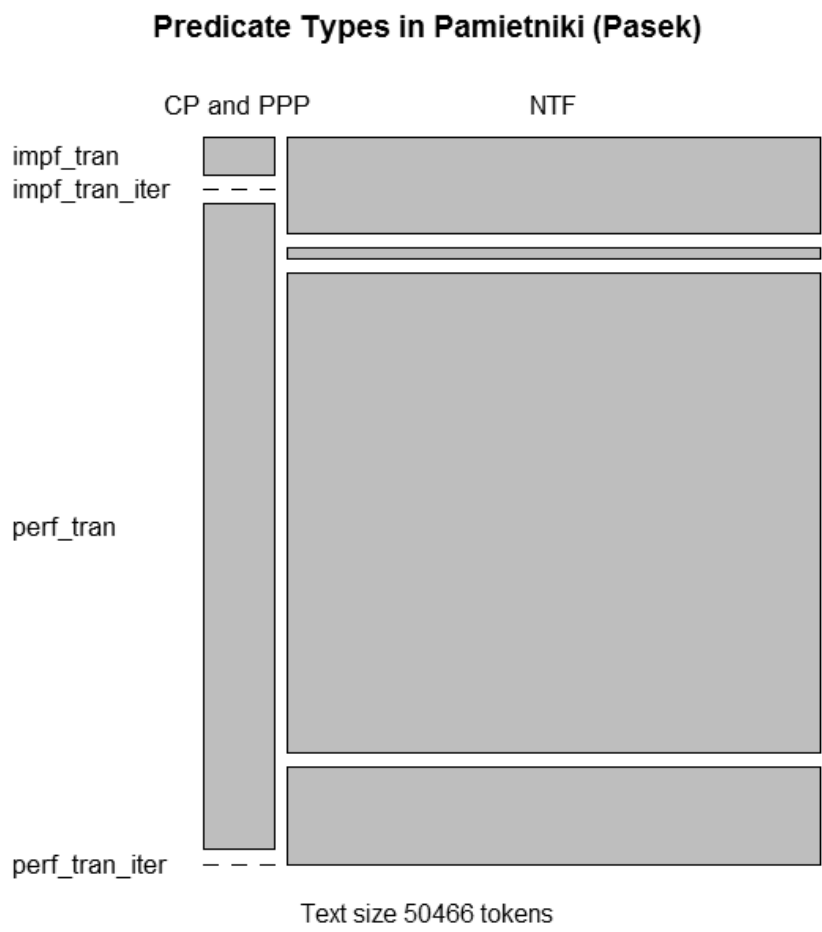
This data frame consists of 152 observations of 2 variables. The independent factor “agent” has 3 levels, cf. the table below:

	inst agent	none	od-PP
CP and PPP	0	16	2
NTF	1	131	2

X-squared = 5.8423, df = 2,  $p$ -value = 0.05387; Fisher's  $p$ -value = 0.107.



Chart 6.7.3.c

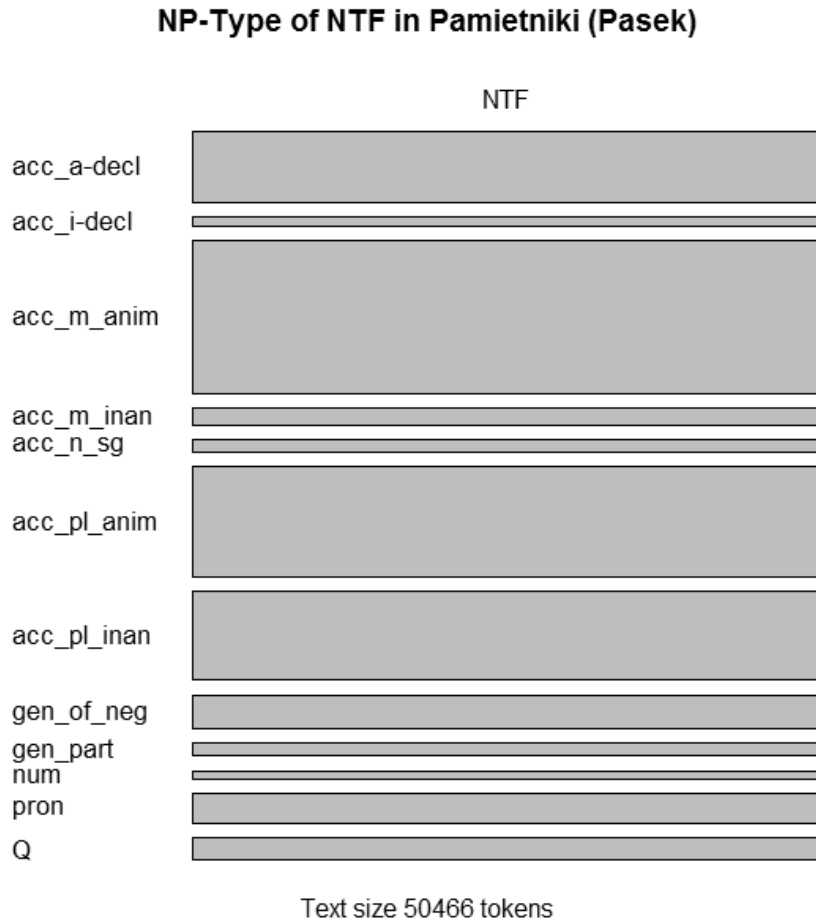


This data frame consists of 152 observations and 2 variables. The independent factor “predicate” has 4 levels, cf. the table below:

	impf_tran	impf_tran_iter	perf_tran	perf_tran_iter
CP and PPP	1	0	17	0
NTF	19	2	94	19

X-squared = 5.0004, df = 3, *p*-value = 0.1718; Fisher's *p*-value = 0.1822.

**Chart 6.7.3.d**



The data frame consists of 134 observations of 2 variables. The independent variable “NP” has 12 levels, cf. the table below:

	acc_a-decl	acc_i-decl	acc_m_anim	acc_m_inan	acc_n_sg	acc_pl_anim	acc_pl_inan
NTF	17	2	36	4	3	26	21
	gen_of_neg	gen_part	num	pron	Q		
NTF	8	3	2	7	5		

X-squared = 124.09, df = 11,  $p$ -value < 2.2e-16.

### Regression Analysis 6.7.3.e

#### Pamiętniki (Pasek)

#### Logistic Regression Model

lrm(formula = NTF\_or\_PPP ~ Copula + Subjunctive\_mood + Agent + Predicate\_type + Copula:Agent + Copula:Predicate\_type + Subjunctive\_mood:Predicate\_type + Agent:Predicate\_type)

The significance level is set to 0,05, that is  $p$ -value < 0,05 is envisioned as sufficient to reject the null hypothesis.

		Model Likelihood		Discrimination		Rank Discrim.	
		Ratio Test		Indexes		Indexes	
Obs	152	LR chi2	99,38	R2	0,93	C	1
NTF	134	d.f.	8	g	4,23	Dxy	0,99
CP	18	Pr(> chi2)	<0.0001	gr	68,65	gamma	1
max	deriv  0.002			gp	0,21	tau-a	0,21
				Brier	0,01		

	Coef	S.E.	Wald	Z Pr(> Z )
Intercept	-10.9250	24.8949	-0.44	0.6608
Copula	13.2276	24.9160	0.53	0.5955
Subjunctive_mood	-1.2040	1.5598	-0.77	0.4402
Agent	-0.0303	109.3465	0.00	0.9998
Predicate_type	-0.1571	30.7232	-0.01	0.9959
Copula * Agent	-2.6445	108.8229	-0.02	0.9806
Copula * Predicate_type	12.2941	1366.4988	0.01	0.9928
Subjunctive_mood * Predicate_type	0.7252	85.1746	0.01	0.9932
Agent * Predicate_type	-0.0331	174.5189	0.00	0.9998

$p$ -values in the Chi-Square and Fisher's independence tests:

Copula: X-squared = 135.24, df = 4,  $p$ -value < 2.2e-16; Fisher's  $p$ -value < 2.2e-16.

Subjunctive\_mood: X-squared = 0.53442, df = 1,  $p$ -value = 0.4648; Fisher's  $p$ -value = 0.2191.

Agent: X-squared = 5.8423, df = 2,  $p$ -value = 0.05387; Fisher's  $p$ -value = 0.107.

Predicate\_type: X-squared = 5.0004, df = 3,  $p$ -value = 0.1718; Fisher's  $p$ -value = 0.1822.

COMMENT:

The model's predicting and fitting ability is close to 100%, as obvious from the fact that coefficients  $R^2$ , C and Dxy are close to 1. The  $p$ -values of the 4 core factors and their interactions within the model are too high to reject the null hypothesis. The correspondent  $p$ -values in the normality testes are considerably smaller, but not small enough to contradict the null hypothesis.

## 6.8. Summary

In the late 15<sup>th</sup> – early 16<sup>th</sup> c. Polish text we have scrutinized the majority of CP records are attested with past *być*-copula; in CP there are also several records of *być*-copula in the present tense, as well as *zostać*-copula. The NTF have been employed considerably less frequently than CP. Contrary to what is claimed by Klemenciewicz, *zostać*-copula have already been attested in Polish passives in the 16<sup>th</sup> and 17<sup>th</sup> c. records. NTF (infrequently) co-occurs with past, fut and pres *być*-copula. Complementizers in the structure of NTF do not seem to trigger any tense marking auxiliaries into their phrase structure. Besides, CP co-occurs with *od*-PP and *przez*-PP, while NTF has been attested with *przez*-PP alone. Both CP/PPP and NTF records are formed from perfective and imperfective verbal stems, the NTF records being considerably more frequent than CP/PPP. The formation from iterative perfective verbs has been more frequently attested in NTF than in CP/PPP, while the formation from iterative imperfectives has been attested exclusively in NTF.

In the mid-16<sup>th</sup> c. text both CP and NTF have been attested with past and present *być*-copula. The NTF records have been employed considerably more often than CP. Complementizers in this text do not usually trigger tense marking auxiliaries into the structure of NTF. The only attested agent expression type is *od*-PP in CP construction. While CP records are all formed from perfective transitive verbs, NTF records have been often formed from imperfective transitive verbs as well. Similar to the mid-16<sup>th</sup> c. text, in our mid-17<sup>th</sup> c. text NTF are considerably more frequent than CP. CP has been attested with both *być*-copula and *zostać*-copula. NTF has been (rarely) attested with *być*-copula in the past tense. Complementizers do not trigger tense marking auxiliaries into NTF structure in this text. The *być*-copula in CP has been attested in the present tense and the present habitative tense. CP and NTF both co-occur with agent expressions in the form of *od*-PP. Contrary to CP that are formed predominantly from perfective and rarely from imperfective verbal stems, NTF records are additionally frequently formed from perfective iterative and imperfective iterative verbal stems.

## 7. Conclusions

**Objective 1: trace the relative frequency of *-no*, *-to* predicates in relation to periphrastic passives in Middle Ukrainian and (to a lesser degree) in Middle Polish texts.**

**1 (a): determine the frequency and distribution of passivoid phenomena over the centuries in Middle Ukrainian texts.**

The data at our disposal has revealed that *-no*, *-to* structures do not considerably grow in productivity within the Middle Ukrainian period, even though there is a slight rise in their use toward the 18<sup>th</sup> c., and especially toward the 17<sup>th</sup> c. A significant rise of passivoid phenomena – that is *-no*, *-to* together with periphrastic and especially participial passives – is observed in the 18<sup>th</sup> c., which is obvious from the fact that the records for 18<sup>th</sup> c. passivoid phenomena are twice as numerous as those of the 16<sup>th</sup> and 17<sup>th</sup> c. respectively, even though the sub-corpora for each century are approximately the same size, and text configurations are moderately alike. The high productivity of passivoid phenomena in the 18<sup>th</sup> c. is mainly due to the prominent increase in the use of participial passives, that is passive participles without any tense marking auxiliaries in their structure – most likely under the influence of the cognate phenomena in (Great) Russian language variety. While the frequency of participial passives increases in the course of the Middle period, the frequency of periphrastic passives declines.

Below is the data on relative frequency of passivoid phenomena in Middle Ukrainian texts over the centuries: 15<sup>th</sup>-16<sup>th</sup> c. texts – 71% CP/PPP, 29% NTF; 17<sup>th</sup> c. texts – 58,5% CP/PPP, 41,5% NTF; 18<sup>th</sup> c. texts – 53% CP/PPP, 47% NTF. As obvious from the figures above, periphrastic and participial passive is generally more frequently employed than *-no*, *-to* forms in our corpus of texts. Besides, this statement is true in case of all text types we have investigated. However, the gap between *-no*, *-to* and other passivoid phenomena becomes smaller toward the end of the Middle period – the *-no*, *-to* vs. passive figures draw nearer, so that their distribution is almost equal in the 18<sup>th</sup> c. It goes without saying, that the majority of *-no*, *-to* records involved in relative frequency estimations above are headed by NPs syncretic between nominative and accusative, and consequently can be the instances of periphrastic passives. So that the ratio CP/PPP vs. NTF should be in fact further elevated in favor of the first. We cannot estimate in how far the figures should be elevated though, since *-no*, *-to* predicates in Middle Ukrainian are crucially employed as both agreeing and non-agreeing predicates.

**1 (b): determine the frequency and distribution of passivoid phenomena across texts of different types in Middle Ukrainian.**

The relative frequency of periphrastic passive phenomena in comparison to *-no*, *-to* across text types is given below: Ruthenian Chronicles – 62% CP/PPP and 38% NTF; Cossack Writings – 54% CP/PPP and 46% NTF; Diaries and Memoirs – 63% CP/PPP and 37% NTF; Religious Polemics – 66% CP/PPP and 34% NTF; Local and Monastery Chronicles – 54% CP/PPP and 46% NTF; Entertaining Fiction – 52% CP/PPP and 48% NTF; Pilgrimage Reports, late Vitas and a Testament – 57% CP/PPP and 43% NTF; Poetry of 1500s – 85% CP/PPP and 15 % NTF; Poetry of 1600s – 76% CP/PPP and 24% NTF; Poetry and Drama of 1700s – 74% PPP and 26% NTF; Poltava trial records – 51% CP/PPP and 49% NTF; Court files of the Żytomyr town administration – 62% CP/PPP and 38% NTF. It is important to mention that the prevalence of passives over *-no*, *-to* in the sub-corpora of Ruthenian Chronicles, Religious Polemics, Entertaining Fiction, Pilgrimage Reports and Poetry of 1500s is due to the high productivity of periphrastic passives, while the prevalence of agreeing passives over *-no*, *-to* predicates in Cossack Writings, Diaries and Memoirs, Poetry and Drama of 1700s is due to the high productivity of participial passives. As already mentioned in the previous section, *-no*, *-to* predicates are employed as both agreeing and non-agreeing predicates throughout the entire Middle period.

**1 (c): determine the frequency and distribution of passivoid phenomena in Middle Polish texts.**

While canonical and periphrastic passives clearly outnumber *-no*, *-to* forms in Middle Ukrainian, the ratio is reverse in Middle Polish, both in contaminated and in non-contaminated Middle Polish texts we have analyzed. The following distribution has been attained: in Middle Polish contaminated texts NTF (83%) are considerably more frequent than CP (17%). The distribution of NTF in comparison to CP over the centuries in contaminated texts is as follows: 15<sup>th</sup>-16<sup>th</sup> c. text – 80% NTF and 20% CP/PPP; 18<sup>th</sup> c. texts – 83% NTF and 17% CP. Unfortunately we have not been able to include a 17<sup>th</sup> c. contaminated text into our investigation. The overall relative frequency of NTF in comparison to periphrastic passives in Middle Polish canon, that is non-contaminated texts, generally resemble the data on contaminated texts: NTF (70%) are considerably more frequent than CP/PPP (30%). The distribution of *-no*, *-to* in comparison to periphrastic passives over the centuries differs though, cf. the relative frequency figures below, especially the data on the 15<sup>th</sup> and 16<sup>th</sup> c., that is: late 15<sup>th</sup>-early 16<sup>th</sup> c. – 42% NTF and 58% CP/PPP; 17<sup>th</sup> c. – 83% NTF and 17% CP; 18<sup>th</sup> c. – 88% NTF and 12% CP. In contrast to *-no*, *-to* in Middle Ukrainian, *-no*, *-to* forms in Middle

Polish usually function as non-agreeing predicates, with the exception of two early 16<sup>th</sup> c. texts that do not employ *-ne*, *-te* desinence to mark neuter agreeing predicates yet.

**Objective 2: Investigate tense marking auxiliaries in the structure of *-no*, *-to* in Middle Ukrainian and (to a lesser degree) in Middle Polish corpus of texts.**

**2 (a): determine whether *-no*, *-to* predicates co-occur with past, present and future tense marking auxiliaries.**

Our data contradict the claim made in Österreicher (1926) that the earliest exx of accusative assigning Ukrainian *-no*, *-to* copied the surface syntax of the Polish *-no*, *-to* in appearing without past auxiliaries and without agent expressions. Neither is the Lavine's (2013) related observation on the Ukrainian *-no*, *-to* of the Middle period as being faithful to its Polish syntactic cognate, particularly in appearing without an auxiliary, consistent with our data. In fact, there are several *-no*, *-to* structures in our corpus of texts marked with accusative complement unambiguously co-occurring with past tense marking auxiliary *bylo* to denote pluperfect in the 16<sup>th</sup> and 17<sup>th</sup> c. Middle Ukrainian, especially in its North Ukrainian variety. Besides, we have to reject the hypothesis of Arpolenko et al (1983, 41) stating that *-no*, *-to* in official documents and charters usually occur without any tense marking auxiliaries in the structure. Our data proves exactly the opposite – tense marking auxiliaries are especially frequent in the structure of *-no*, *-to* in official documents, particularly in court files and trial records written in North Ukrainian language variety.

The corpus based diachronic investigation that was carried out has revealed that *-no*, *-to* forms headed by morphological accusative in the environment of past copula have been attested already in the 16<sup>th126</sup> c., especially frequently in *Luc'k Castle Book* of 1560-1561. Such *-no*, *-to* records co-occurring with past auxiliaries have been attested in *Court Files of Žytomyr* of 1635 as well. All of the 16<sup>th</sup> and 17<sup>th</sup> c. administrative *-no*, *-to* records co-occurring with past copula designate pluperfect, that is they relate to the action in the past that took place before another action in the past. Accusative assigning *-no*, *-to* co-occur with the future tense marking auxiliary as well. To be precise, in addition to its pluperfect function, by the year 1635 the accusative assigning *-no*, *-to* predicates have also developed the function of denoting the future action by unspecified persons, as obvious from several *-no*, *-to* records headed by morphological accusative co-occurring with the future copula *budet* in the court

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<sup>126</sup>In theoretical literature the earliest ex of morphological accusative and past auxiliary in the structure of *-no*, *-to* is from the year 1517 (*Litovskaja metrika*).

files of 1635.

The crucial point here is that the unambiguously accusative assigning *-no*, *-to* with past copula are frequently employed in Middle Ukrainian, and especially in its North Ukrainian variety to designate pluperfect, which suggests that *-no*, *-to* predicates with direct object complement had been properly embedded in the system of past tenses already in mid-16<sup>th</sup> c. In other words, our data suggests that accusative assigning *-no*, *-to* with past or future auxiliary in the structure is not necessarily a 16<sup>th</sup> c. syntactic borrowing from Polish, as generally claimed in literature. In both theoretical literature on Middle Polish *-no*, *-to*, and in our sub-corpus of late 15<sup>th</sup>, 16<sup>th</sup> and 17<sup>th</sup> c. Polish texts the co-occurrence of morphological accusative and past auxiliaries in the structure of *-no*, *-to* is rare. As a matter of fact we deal with only 2 *-no*, *-to* records headed by an *a*-declension noun: one from the year 1624 cited in Österreicher (1926) and another one attested in *Dworzanin* (1566) by Gornicky from our PolDi corpus. The Polish *-no*, *-to* headed by nouns non-syncretic between nominative and accusative with a future auxiliary in the structure are altogether unreported in literature. Neither have we come across any future auxiliary in the structure of *-no*, *-to* in any of the Middle Polish texts we have investigated.

The *-no*, *-to* headed by noun phrases not syncretic between nominative and accusative do not usually co-occur with present copula in Middle Ukrainian: at least neither in our administrative documents, nor in our literary corpus of texts. There is however one such ex of *-no*, *-to* headed by a noun not syncretic between nominative and accusative co-occurring with the present auxiliary *sut'* attested in a Poltava trial record of 1691 written in Central Ukrainian language variety. Generally, the Central Ukrainian language variety employed in Poltava trial records differs considerably from its North Ukrainian cognate. In contrast to numerous accusative assigning *-no*, *-to* with past auxiliary in official documents from North Ukrainian area, there is only one such record of *-no*, *-to* denoting pluperfect in a large body of Poltava trial records from Central Ukraine, in a file of 1683. The North Ukrainian language variety is believed to be the oldest language variety spoken on the territory of today's Ukraine, and the closest counterpart of the variety spoken in the Kievan Rus', while the Central Ukrainian dialects are reported to have been formed in the 16<sup>th</sup> c. or later, and exposed to strong (Great) Russian influence already in late 17<sup>th</sup> c.

Another crucial observation is the fact that the 18<sup>th</sup> c. *-no*, *-to* that co-occur with tense marking auxiliaries are never headed by a morphological accusative. In our corpus the 18<sup>th</sup> c. *-no*, *-to* usually co-occur with auxiliaries in environments syncretic between nominative and accusative, such as with neuter nouns and pronouns, numerical phrases and units of



measurement as the head noun phrase, which means that they can all be agreeing passives; rarely the 18<sup>th</sup> c. *-no*, *-to* with tense auxiliaries in the structure are headed by accusative-genitive animates. Such complete absence of morphological accusative co-occurring with auxiliaries in the structure of the 18<sup>th</sup> c. *-no*, *-to*, as well as its rare occurrence in late 17<sup>th</sup> c. texts confirms Shevelov's (1969) keen observation that goes: "...along with the Polish constructions of the type, by the 17<sup>th</sup> century they [*-no*, *-to* forms] had acquired the function of denoting past action by unspecified person(s) [that is they acquire a *by*-phrase and begin to function as impersonal clauses]. However, with neuter nouns [and obviously with other forms syncretic between nominative and accusative, like numerical phrases] Ukrainian preserved its original use of *-no/-to* as participles of personal sentences. Hence while (as in Polish) *bulo*, *bude* were lost in impersonal *-no/-to* sentences, they were retained in personal ones with neuter nouns. [...] Such a situation was internally contradictory, but it was preserved for a long time (and perhaps still in some areas?), especially in those parts of the Ukraine in which Ukrainian-Polish bilinguality supported this asymmetrical use" (180-181).

The tense marking auxiliaries surface in the structure of accusative assigning *-no*, *-to* in the 16<sup>th</sup> and especially 17<sup>th</sup> c. Middle Polish texts we have investigated as well. The *-no*, *-to* forms in our early 16<sup>th</sup> c. texts – both contaminated and non-contaminated – still function as both agreeing and non-agreeing predicates, so that the overwhelming majority of early Polish *-no*, *-to* attested with copula in the present, past and future tense can be the instances of agreeing passives. However, the past copula has also been attested in the structure of *-no*, *-to* headed by accusative-genitive plural animates in an early 16<sup>th</sup> c contaminated text, as well as by the genitive in an early 16<sup>th</sup> c. non-contaminated text. The mid-16<sup>th</sup> c. and 17<sup>th</sup> c. Polish *-no*, *-to* with past auxiliary are headed by accusative-genitive singular and plural animates; in isolated cases also by the genitive of negation, and by an *a*-declension noun. The Polish *-no*, *-to* in the 18<sup>th</sup> c. texts do not host any tense marking auxiliaries in their structure at all, with the exception of 2 *-no*, *-to* forms headed by neuter pronouns attested in a short contaminated text that still employs *-no*, *-to* to mark agreeing passives.

**2(b): determine the degree of variation in the domain of tense marking auxiliaries, as well as their distribution in periphrastic passives and in *-no*, *-to* predicates over centuries.**

In comparison to rich variation in the domain of tense marking auxiliaries in the structure of periphrastic passives that have been attested with at least 8 copula types, the presence of tense marking auxiliaries in *-no*, *-to* is restricted to one copula type: the Northern Ukrainian copula *byt'* in the past or in the future tense, the former being more frequent –

possibly out of pragmatic reasons. In fact *-no*, *-to* headed by noun phrases not syncretic between nominative and accusative in our corpus have only been attested with the past auxiliary *bylo* and the future auxiliary *budet* in their structure<sup>127</sup>. Canonical passives in contrast co-occur with Church Slavonic aorist copula *byst'*, North Ukrainian copula *byt'* in the future, present and past tense, Polish copula *zostać* in the present and past tense, with the standard Modern Ukrainian copula *buty* in the past and future tense, as well as with the contaminated tense marking auxiliaries like semi-Polish copula *stati* in the past tense, as well as the hybrid copulas that are basically crossings of their cognates in North Ukrainian and Central Ukrainian dialects, especially tangible in the 3<sup>rd</sup> person singular, cf. *byv* – a crossing of the North Ukrainian *byti* and the standard Ukrainian *buty*; or *bul* – another crossing of the North Ukrainian *byti* and the standard Ukrainian *buty*.

The copula *zostati*, a cognate of the Polish *zostać*, in the structure of Middle Ukrainian periphrastic passives has been attested already in early 16<sup>th</sup> c. in the Ruthenian chronicles we have investigated, in contrast to the claims made in Bevzenko et al (1978, 308-309) about the copula *zostati* as a mid-17<sup>th</sup> c. phenomenon. Besides, our data on Middle Polish refutes the claims made in Brajerski (1972, 38), namely his observation that the copula *zostać* in periphrastic passives surfaces in the second half of the 17<sup>th</sup> c. for the first time – the Polish copula *zostać* in the structure of periphrastic passives has in fact already been attested in late 15<sup>th</sup>-early 16<sup>th</sup> c., as obvious from our Polish records of passivoid phenomena. Below we offer the figures obtained in the process of evaluation of tense marking auxiliaries in the structure of canonical and participial passives and *-no*, *-to* of the Middle period.

The 16<sup>th</sup> c. corpus of literary Middle Ukrainian texts consists of 970 observations, namely 289 NTF records and 681 CP/PPP records (464 CP and 217 PPP). The unambiguously marked 16<sup>th</sup> c. accusative assigning *-no*, *-to* predicates in this sub-corpus have been attested only with the (Great) Russian/North Ukrainian copula *byti* in the past tense<sup>128</sup>. Altogether there are 56 copulas attested in the structure of *-no*, *-to*, the overwhelming majority of which however are syncretic between nominative and accusative, and consequently can be the instances of periphrastic passives. The distribution of copulas in NTF is as follows: 44,5% (25 records) of all NTF co-occur with (Great) Russian/North Ukrainian copula type in the past

127 There is also 1 record of *-no*, *-to* headed by morphological accusative with the modern Ukrainian copula *bulo*, which however can be a misprint or an instance of later insertion or manipulation.

128 There is one record of modern Ukrainian copula *buty* attested in *Istoriya o Attili* in the structure of *-no*, *-to* headed by an accusative-genitive masculine singular form as well, which however might be the product of later manipulation, since none of the 16<sup>th</sup> c. non-administrative texts has this copula type, while in the *Istoriya o Attili* it comes in dozens in both canonical passives and *-no*, *-to*. Our suspicion has not been confirmed anywhere in secondary literature though.

tense; 16% (9 records) – with (Great) Russian/North Ukrainian copula type in the present tense; 9% (5 records, 2 of them habitative) – with (Great) Russian/North Ukrainian copula type in the future tense; 26,8% (15 records) – with Church Slavonic aorist copula; 1,8% (1 record) – with modern Ukrainian copula in the past tense; and 1,8% (1 record) – with Polish *zostać* copula in the past tense. The few unambiguously accusative assigning *-no*, *-to* records that have been encountered with a copula in the structure are headed either by genitive-accusative plural animates (2 records), or genitive-accusative singular masculine animate (1), or by the genitive of negation with a complementizer in the structure (1). What is striking about the 16<sup>th</sup> c. non-administrative, that is literary, texts of the Middle period is the complete absence of *a*-declension nouns co-occurring with tense marking auxiliaries in the structure of NTF.

The distribution of copula types in the periphrastic passive construction attested in our 16<sup>th</sup> c. literary texts is as follows: 28% (129 records) of all passive participles in our non-administrative texts co-occur with (Great) Russian/North Ukrainian copula type in the past tense; 22,8% (106 records; 1 of them is a habitative) – with (Great) Russian/North Ukrainian copula type in the present tense; 6,7% (31 record) – with (Great) Russian/North Ukrainian copula type in the future tense; 9,2% (43 records) – with modern Ukrainian copula in the past tense; 3,6% (17 records) – with Polish *zostać* copula in the past tense; and 0,2% (1 record) – with Polish *zostać* copula in the present tense. The only copula type attested in our 16<sup>th</sup> c. administrative documents, namely in Luc'k book of 1560-1561 is (Great) Russian/North Ukrainian copula *byti* in the past tense. Altogether there are 14 *-no*, *-to* records with tense marking auxiliaries attested in these files, 7 of them have been attested in an environment not syncretic between nominative and accusative. All of them designate pluperfect.

Our 17<sup>th</sup> corpus of Middle Ukrainian literary texts consists of 1024 observations, namely 579 NTF records and 445 CP/PPP records (149 CP and 296 PPP). Similar to the 16<sup>th</sup> c. figures, the unambiguously marked 17<sup>th</sup> accusative assigning *-no*, *-to* predicates in this sub-corpus have been attested only with the (Great) Russian/North Ukrainian copula *byti* in the past tense. In sharp contrast to the 16<sup>th</sup> c. NTF, the 17<sup>th</sup> c. NTF with a copula in the structure no longer designate pluperfect, or at least it is no longer clear whether they designate pluperfect or simple past. Altogether there are 28 copulas attested in the structure of *-no*, *-to*, the overwhelming majority of which however are headed by forms syncretic between nominative and accusative, and consequently can be the instances of periphrastic passives. The 17<sup>th</sup> c. copulas (28) in the structure of NTF are less numerous in comparison to the 16<sup>th</sup> c. copulas (56), even though the number of *-no*, *-to* records is considerably bigger in the 17<sup>th</sup> c.

(597) than in the 16<sup>th</sup> c. (289). Besides, while in the 16<sup>th</sup> c. the periphrastic passive has been registered almost twice as often as participial passive, the ratio changes drastically in the 17<sup>th</sup> c., namely now the participial passives are twice as frequent as canonical passives.

The distribution of the 17<sup>th</sup> c. copulas in NTF is as follows: 89,3% (25 records) of all NTF with a copula in their structure co-occur with (Great) Russian/North Ukrainian copula type in the past tense; 3,6% (1 record) – with (Great) Russian/North Ukrainian copula type in the present tense; 3,6% (1 record) – with (Great) Russian/North Ukrainian copula type in the future tense; 3,6% (1 record) – with Church Slavonic aorist copula. The few unambiguously accusative assigning *-no*, *-to* records that have been encountered with this copula type are headed by either genitive-accusative plural inanimates (1 record), or genitive-accusative singular masculine animate (1), or by accusative-genitive plural inanimates (2), and by an *a*-declension noun (1). The distribution of the 17<sup>th</sup> c. copula types in periphrastic passive in literary texts is as follows: 39,6% (59 records) of all passive participles in our non-administrative texts co-occur with (Great) Russian/North Ukrainian copula type in the past tense; 27% (40 records) – with (Great) Russian/North Ukrainian copula type in the present tense; 4% (6 records) – with (Great) Russian/North Ukrainian copula type in the future tense; 12% (18 records) – with Church Slavonic aorist copula in the past tense; 14,7% (22 records) – with modern Ukrainian copula in the past tense; 2% (3 records) – with Polish *zostać* copula in the past tense; and 0,7% (1 record) – with a hybrid semi-Polish copula in the past tense.

The 17<sup>th</sup> c. corpus of administrative texts consists of the court files of Żytomyr (1635-1636) and several Poltava trial records (1668-1699). The variation with respect to copula type in passivoid phenomena in the court files of Żytomyr (1635) is more restricted than in case of literary texts above. The NTF (52 records altogether) has been attested exclusively with (Great) Russian/North Ukrainian copula (12) in their structure. The distribution of copula types in NTF is as follows: 75% (9 records) co-occur with (Great) Russian/North Ukrainian copula type in the past tense; 25% (3 records) – with (Great) Russian/North Ukrainian copula type in the future tense. The *-no*, *-to* records with past tense copula are headed by morphological accusative (1), or old accusative-nominative plural inanimates (2). In comparison to *-no*, *-to* records with copula in literary texts that in the 17<sup>th</sup> c. tend to designate simple past, all of the 17<sup>th</sup> c. *-no*, *-to* with copula in court files of Żytomyr town administration (1635) clearly designate pluperfect. The CP (41) has been attested with (Great) Russian/North Ukrainian copula in the past tense – 51,2% (21 records); with (Great) Russian/North Ukrainian copula in the present tense – 34,1% (14 records); with (Great) Russian/North Ukrainian copula in the future tense – 12,2% (5 records); and with standard Ukrainian copula

– 2,5% (1 record).

The presence of the standard Ukrainian copula *buty* in the court files written predominantly in North Ukrainian language variety might speak for its contamination via Central Ukrainian dialects. The results obtained in Poltava trial records (1668-1699) do not substantially differ from those in court files of Żytomyr town administration (1635). NTF (88 records altogether) in Poltava trial records co-occur with (Great) Russian/North Ukrainian copula in the past tense – 77% (17 records); with (Great) Russian/North Ukrainian copula in the present tense – 14% (3 records) and with (Great) Russian/North Ukrainian copula in the future tense – 9% (2 records). The *-no*, *-to* records with past tense copula are headed i.a. by accusative-genitive masculine singular animate form (1) that designates pluperfect; and by new accusative-genitive plural inanimates (1), with a complementizer in their structure. All other *-no*, *-to* predicates with tense auxiliaries are headed by forms syncretic between nominative and accusative and designate simple past. The CP (45) in Poltava trial records has been attested with (Great) Russian/North Ukrainian copula in the past tense – 47% (21 records); with (Great) Russian/North Ukrainian copula in the present tense – 20% (44 records); with (Great) Russian/North Ukrainian copula in the future tense – 7% (3 records); and with Polish *zostać*-copula in the past tense – 2,5% (1 record).

Our 18<sup>th</sup> c. corpus of literary Middle Ukrainian texts consists of 1951 observations, namely 653 NTF records and 1298 CP/PPP records (276 CP and 1022 PPP). There are only 33 copulas attested in the structure of *-no*, *-to* headed predominantly by noun phrases syncretic between nominative and accusative. The distribution of copula types in NTF is as follows: 73% (24 records) of all NTF co-occur with (Great) Russian/North Ukrainian copula type in the past tense; 15% (5 records) – with (Great) Russian/North Ukrainian copula type in the future tense; 3% (1 record) – with modern Ukrainian copula in the past tense; and 9% (3 records) – with aorist copula, which however should be interpreted as a stylistic embellishment. The few accusative assigning *-no*, *-to* records that have been encountered with past copula are headed either by genitive-accusative plural animates (2 records), or genitive-accusative singular animate (1), or by the genitive-accusative plural inanimate (1). The tense marking auxiliaries in *-no*, *-to* headed by *a*-declension nouns or correspondent modifiers have not been attested in our 18<sup>th</sup> c. literary texts of the Middle period.

The distribution of copula types in the periphrastic passive construction in our 18<sup>th</sup> c. literary texts is as follows: 54% (149 records) of all passive participles co-occur with (Great) Russian/North Ukrainian copula type in the past tense; 5% (14 records) – with (Great) Russian/North Ukrainian copula type in the present tense; 14% (39 records) – with (Great)

Russian/North Ukrainian copula type in the future tense; 12% (33 records) – with modern Ukrainian copula in the past tense; 8% (22 records) – with Polish *zostać* copula in the past tense; and 1,5% (4 records) – with the hybrid semi-Polish copula in the past tense. The 18<sup>th</sup> c. periphrastic passives have also been attested with the imperfect copula – 2% (5 records), and with aorist copula – 3,5% (10 records), that however seem to be employed as a fancy stylistic embellishment, which is obvious from the fact that the endings of aorist and imperfect are no longer used properly<sup>129</sup>.

In our small corpus of the 18<sup>th</sup> c. administrative documents, namely in Poltava trial records of 1700-1740, there are 16 records of NTF and 31 record of CP/PPP (17 CP and 14 PPP). The periphrastic passive has been attested with (Great) Russian/North Ukrainian copula *byti* in the past tense – 88% (15 records, 2 of them habitative), and the Polish *zostać* copula in the past tense – 12% (2 records). There are 2 *-no*, *-to* forms attested, that co-occur with a (Great) Russian/North Ukrainian copula in the future tense, and can both be the instances of agreeing passives, since they are headed by forms syncretic between nominative and accusative.

The Middle Polish sub-corpus of non-contaminated texts consists of 345 observations, namely of 240 NTF and 105 CP/PPP. The distribution of copula types in the periphrastic passive construction in early 16<sup>th</sup> c. texts is as follows: 89,5% (60 records) of all passives co-occur with the *być*-copula in the past tense; 9% (6 records) – with the *być*-copula in the present tense; and 1,5% (1 record) – with the *zostać*-copula in the past tense. There are only 17 copulas attested in passivoid phenomena in the mid-16<sup>th</sup> c. text, cf. the distribution of auxiliaries is as follows: 80% (8 records) have been attested with the *być*-copula in the past tense; 20% (2 records) – with the *być*-copula in the present tense; besides there are 7 past auxiliaries in the structure of NTF. In the mid-17<sup>th</sup> c. text, there are 20 copulas attested in passivoid phenomena, cf.: 78% (14 records) of all passives co-occur with the *być*-copula in the past tense; 16,5% (3 records) – with the *być*-copula in the present tense; and 5,5% (1 record) – with the *zostać*-copula in the past tense; there are 2 records of *być*-copula in the past tense in the structure of NTF. The Middle Polish sub-corpus of contaminated texts consists of 392 observations, 327 NTF and 65 CP. In the 16<sup>th</sup> c. text there are only 7 records of past tense auxiliaries in the structure of CP, and 2 past auxiliaries in the structure of NTF. The distribution of tense marking auxiliaries in the 18<sup>th</sup> c. texts is as follows: 70% (40 records) have been attested with the *być*-copula in the past tense; 30% (17 records) – with the *być*-

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<sup>129</sup>We especially refer to the early 18<sup>th</sup> c. chronicle *Litopys Hrabjanky*, where the 3<sup>rd</sup> person singular imperfect form seems to be used to designate the 3<sup>rd</sup> person plural. It goes without saying that imperfect forms attested in Middle Ukrainian are no longer employed to describe iterative and durative actions.

copula in the present tense; there are 4 records of past auxiliaries in the structure of NTF.

**2 (c): clarify whether the presence of complementizers (modal particles) triggers the tense marking auxiliaries into the structure of Ukrainian and Polish -no, -to historically.**

Modal particles (complementizers) *aby*, *žeby*, and *by* do not trigger any auxiliaries into the structure of -no, -to in any of the literary texts we analyzed. The copula *bylo* and modal particles only co-occur in the structure of -no, -to headed by neuter nouns and other forms syncretic between nominative and accusative, that we all qualify and agreeing passives. Neither do modal particles trigger tense marking auxiliaries into the structure of -no, -to headed by the genitive of negation. The same is true for administrative texts written in North Ukrainian language variety: the past auxiliary and modal particles only co-occur in the environment syncretic between nominative and accusative. The subjunctive -no, -to forms headed by genitive-accusative plurals and genitive of negation (forms not syncretic between nominative and accusative) never host past auxiliaries in their structure, cf. typical exx *aby*<C> *pyv ne*<NEG> *vareno*<NTF> *i medov ne*<NEG> *syčono*<NTF>; *žeby*<C> *nas*<ACC/GEN\_pl\_anim> *propuščovano*<NTF> (Luc'k Castle book). There is however 1 record in our corpus of texts, attested in Poltava trial records in 1689 of -no, -to headed by the genitive of negation that does trigger the past auxiliary, a pattern strongly reminiscent of the use of genitive of negation in (Great) Russian language variety, cf. *aby*<C> *na ne(m'')*, *Ivanu Mazuru, ža(d)nych'' vymy(s)lov''*<GEN> *v po(d)vode(ch) v('')* *datka(ch) horodovy(ch) i stacy(j)nych'' ne*<NEG> *bylo*<AUX\_past> *vymahano*<NTF> *do sme(r)ti jeho*.

The results of our investigation with respect to complementizers in Middle Polish radically contradict the claim of Österreicher (1926) about the obligatory co-occurrence of modal particles (complementizer *aby*) and past auxiliaries in the Middle Polish phrase structure. In fact, none out of the 26 -no, -to records in our Middle Polish texts (both contaminated and non-contaminated) introduced by the complementizers *aby* or *by* co-occurs with a past tense marking auxiliary. Complementizers *žeby* (10 records) and *ižby* (3 records) do not trigger any past auxiliaries into the structure of Middle Polish -no, -to either. The only exception to the claim above has been attested in Pasek's *Pamiętniki*, cf. *tak žeby*<C> *było*<AUX> *wszystkich wyduszono*<NTF> *i nikt by nie uszedł*. Thus, the obtained data suggests that the absence of tense marking auxiliaries in the structure -no, -to introduced by a complementizer *aby* is not as anomalous as claimed by Lavine (2013, 15).

**Objective 3: determine the shape and distribution of agent expressions in our Middle Ukrainian and Middle Polish texts.**

**3 (a): determine typical agent expressions for different construction types and text types in Middle Ukrainian and Middle Polish texts.**

Agent expressions are generally less frequently attested in the structure of *-no*, *-to* headed by noun phrases non-syncretic between nominative and accusative than in periphrastic and participial passives of the Middle Ukrainian. The expression in the shape of *od/ot-PP* in the structure of *-no*, *-to* designates the initiator or the instigator of the action, but not its performer, while in the structure of periphrastic and participial passives the same *od/ot-PP* usually designates the performer of the action. The investigation of the Middle Ukrainian literary texts, that is texts whose origin cannot always be accurately determined, has revealed that the standard agent expressions in Middle Ukrainian passivoid phenomena are *čerez-PP* and *prez-PP*, but crucially not the instrumental oblique, and not *ot/od-PP*, which usually designates the source of the action in the texts we have investigated. Isolated instances of agentive *ot/od-PPs* and instrumental agents in our literary texts are attributed to Church Slavonic and later to (Great) Russian influence. The investigation of Middle Ukrainian court files and trial records has revealed a similar pattern – the standard agent expressions in Middle Ukrainian passivoid phenomena are *čerez-PP* and *prez-PP*, but crucially not the instrumental agent. The irrefutably agentive *ot/od-PP* has been usually attested in the structure of periphrastic and participial passives, but crucially not in *-no*, *-to* predicates in legal documents we have scrutinized.

The analysis of literary texts has revealed that unambiguously agentive expressions in the shape of *čerez-PP* are attested in the structure of accusative assigning *-no*, *-to* already in the mid-17<sup>th</sup> c. Ruthenian chronicles, which confirms Shevelov's (1969, 188) claim that “by the 17<sup>th</sup> century they [-no, -to] had acquired the function of denoting past action by unspecified person(s)”. Besides, in this large body of chronicles there is not a single record of the instrumental agent in the structure of *-no*, *-to*. Phrases in the shape of *ot/od-PP* and *prez-PP* in the structure of passivoid phenomena are well attested in the Ruthenian chronicles, but only with NPs syncretic between nominative and accusative, which means that they can all be agreeing passives. Moreover, the analysis of literary texts has revealed that the earliest unambiguously agentive *prez-PP* in the structure of *-no*, *-to* was attested in 1598 in a text written in Ostrog, today's Western Ukraine. In Cossack chronicles there are several records of unambiguously agentive *čerez-PP* in an early 18<sup>th</sup> c. text. The *ot-PP* in the structure of *-no*, *-to*



in Cossack writings can all designate the instigator of the action or its source. Similar to ot-PP in Cossack writings, the od/ot-PPs in the structure of *-no*, *-to* in dairies and memoirs from Central Ukraine usually designate either the instigator of the action, or the instrument, if attested with a collective entity NP. The earliest unambiguously agentive ot-PP that does not designate a source was attested in a text written in Ostrog in 1588 in a language variety that can be described as the Church Slavonic of Ruthenian recension. Another irrefutably agentive ot-PP in the structure of accusative assigning *-no*, *-to* was attested in religious poetry of late 16<sup>th</sup> c., which is also written in the Church Slavonic of Ukrainian recension. The instrumental agent in the structure of *-no*, *-to* in poetry was attested in the 18<sup>th</sup> c. for the first time. An instance of unambiguously agentive instrumental has been encountered in a mid-18<sup>th</sup> c. diary from Central Ukraine as well.

Agent expressions in the structure of *-no*, *-to* are non-existent in Middle Polish texts we have investigated. Although numerous irrefutably agentive od-PPs have been attested in the 16<sup>th</sup> c. non-contaminated text, all of them surface either in periphrastic passives, or in *-no*, *-to* headed by a noun phrase syncretic between nominative and accusative. Several agents in the shape of od-PPs have been attested in periphrastic passives in a 16<sup>th</sup> c. contaminated text as well. To designate an agent in agreeing passives in Middle Polish the *przez*-PP is employed in later centuries, while od-PPs in records of 17<sup>th</sup> and 18<sup>th</sup> c. – in both agreeing and non-agreeing *-no*, *-to* – seem to mark the instigator of the action, not its performer.

### **3 (b): determine differences in shape and distribution of agent expressions in North Ukrainian vs. Central Ukrainian language variety.**

The accounts on agent expressions in traditional historical grammars cannot give us a satisfactory account on the shape and distribution of agent expressions, since in their description of this and related phenomena they do not distinguish between North Ukrainian and Central Ukrainian dialects. The Middle Ukrainian is referred to as a solid, coherent and homogeneous language variety, which it is not – hence accounts contradicting each other as to the frequency and distribution of agent expressions in Middle Ukrainian, cf. e.g. Žovtobryuch (1980, 288), claiming that the agent expressed in the instrumental oblique had been in the process of decay in the course of the Middle period vs. Slyn'ko (1973, 155) claiming the opposite, namely that the shape and distribution of agent expressions changes in favor of instrumental toward the end of the Middle period.

The opinions expressed and statements made in classical grammars are usually attained on the basis of texts produced in Central Ukraine, since those that are written in North Ukrainian dialect have only been edited recently. That is Slyn'ko's (1973, 155) claim

about the changes in the shape and distribution of agent expressions toward the end of the Middle period in favor of instrumental might be true in case of Central Ukrainian dialects, but crucially not of North Ukrainian that does not employ instrumental agents. Besides, Slyn'ko's (1973, 153-155) observation on *čerez*''-PP and *prez*''-PP as not frequently employed in contrast to instrumental agent, can only be true in case of Central Ukrainian language variety. Such predominance of Central Ukrainian texts in the investigation of Middle Ukrainian produced a distorted picture of the period and claims that are only partially true, such as the high frequency of instrumental agent in passivoid phenomena in Middle Ukrainian in general, cf. Žovtobryuch (1980, 287).

The agent expressed in the instrumental oblique is no doubt frequent in periphrastic passives, and especially in participial passives in Central Ukrainian dialects, which is confirmed by our investigation of Poltava trial records (1668-1740). The agent in periphrastic passives in Poltava language variety can, less frequently, be expressed in the shape of *ōt*-PP too. Besides, there are several *ōt*-PPs in the structure of *-no*, *-to* headed by neuter nouns and pronouns, which however can all be the instances of periphrastic passives. The only instrumental agent expression in the structure of *-no*, *-to* with a head noun not syncretic between nominative and accusative in legal documents has been attested in a Poltava trial record of 1683. Our investigation has shown that, with respect to agent expressions, the language variety spoken in the Central Ukraine in general, and in the town of Poltava in particular, differs from the North Ukrainian language variety: Poltava dialects employ neither *čerez*-PP, nor *prez*-PP in passivoid phenomena on the one hand, and frequently employ the instrumental agent on the other, an agent expression alien to North Ukrainian altogether. Besides, our research has shown that the accusative assigning *-no*, *-to* predicates in Central Ukrainian language variety were about 150 years „late“ in acquiring the function of designating past action by unspecified performers by allowing agent expressions, in comparison to the North Ukrainian language variety.

The investigation of North Ukrainian administrative texts has revealed that the earliest legal documents from Luc'k (1560-1561), a city in the historical region of Volynia in today's northwestern Ukraine, do not have any agent expressions in the structure of *-no*, *-to*, even though the records of accusative assigning *-no*, *-to* are very numerous in these files, in comparison to files from other regions we scrutinized. This means that by mid-16<sup>th</sup> c accusative assigning *-no*, *-to* have not yet acquired the function of denoting an oblique agent. The canonical passives in this large body of texts co-occur with agent expressions in the shape

of *ōt*-PP and *čerez*-PP. Court files of the Žytomyr<sup>130</sup> town administration (1635) already have several agent expressions in the shape of *prez*-PP in the structure of *-no*, *-to*. Similar to Luc'k book, another compilation of documents written in North Ukrainian, canonical passives in court files of Žytomyr co-occur with agent expression in the form of *čerez*-PP, *ōt/ōd*-PP and *prez*-PP. The instrumental agent has not been attested in the legal documents of Luc'k and Žytomyr – neither in accusative assigning *-no*, *-to* predicates, nor in periphrastic passives or any other passivoid structure. Thus, the instrumental agent can be described as alien to the North Ukrainian language variety altogether.

Such differences between the point in time of emergence, shape and distribution of agent expressions in both accusative assigning *-no*, *-to* and periphrastic/participial passives confirm Shevelov's (1979) statement that the dialectal differentiation of today's Ukraine is older than the Ukrainian language itself (752).

**Objective 4: determine the distribution of *-no*, *-to* with respect to predicate type in comparison to agreeing passives in Middle Ukrainian, and – to a lesser degree – in Middle Polish texts.**

**4 (a): determine the general distribution with respect to predicate type – perfective vs imperfective, iterative vs non-iterative – in both *-no*, *-to* and agreeing passives.**

The overwhelming majority of all *-no*, *-to* predicates and periphrastic passives of Middle Ukrainian literary texts we have investigated are formed from perfective transitive stems. Although the formation from imperfective verbs represents a marginal phenomena in all text types during the entire Middle period, it is considerably more frequent with *-no*, *-to* than with periphrastic and participial passives. The formation from iterative verbs is typical of *-no*, *-to* structures as well. The overall figures on the predicate type distribution in Middle Ukrainian literary texts we have analyzed is below: 91,8% of all predicates in agreeing passives and *-no*, *-to* are formed from perfective stems; 6% – from imperfective stems; 2% – from perfective iterative stems; and 0,2% – from imperfective iterative stems. In contrast to *-no*, *-to* phenomena, the formation from imperfective iterative stems has not been attested in canonical and periphrastic passives in literary texts. The distribution in *-no*, *-to* in literary texts is similar to the overall numbers above, cf.: 87,5% of all *-no*, *-to* forms are formed from

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<sup>130</sup>The town of Žytomyr is situated eastward from Luc'k, in the northern part of today's Western Ukraine, but it still belongs to the same historical region where North Ukrainian is spoken.

perfective stems, 8% – from imperfective stems; 4% – from perfective iterative stems, and 0,5% – from imperfective iterative stems. The formation from perfective stems in agreeing passives is more frequent than in *-no*, *-to*, cf.: 95% of all *-no*, *-to* predicates attested in literary texts are formed from perfective stems, 4% – from imperfective stems, while 1% – from perfective iterative stems.

The formation from perfective stems in 17<sup>th</sup> and 18<sup>th</sup> c. legal documents is less frequent than in literary texts. The overall figures on predicate type distribution are below: 84% (266 records) of all predicates of agreeing passives and *-no*, *-to* are formed from perfective stems; 14,5% (46 records) – from imperfective stems; 1,5% (4 records) – from perfective iterative stems; and 0,2% – from perfective iterative forms. The distribution of predicate types in *-no*, *-to* resembles the numbers on general distribution of passivoid phenomena, cf. 82% (127 records) of all *-no*, *-to* forms are formed from perfective stems; 17% (26 records) – from imperfective stems; and 1% (1 record) – from perfective iterative stems. The relative frequency of predicate types in canonical and periphrastic passives is similar to the *-no*, *-to* distribution, cf.: 86% (139 records) of all agreeing passives in legal texts are formed from perfective stems; 12% (20 records) – from imperfective stems, and 2% (3 records) – from perfective iterative stems.

In Middle Polish passivoid phenomena we have analyzed, the formation from imperfective and iterative stems is more frequent than in Middle Ukrainian. This is true for both agreeing passives and *-no*, *-to* predicates. The formation from imperfective and iterative stems in *-no*, *-to* is slightly more frequent in contaminated texts than in non-contaminated. The predicate type distribution in passivoid phenomena in Middle Polish non-contaminated texts is as follows: 78% (268 records) of all predicates in agreeing passives and *-no*, *-to* are formed from perfective stems; 15% (52 records) – from imperfective stems; 6% (22 records) – from perfective iterative stems; and 1% (3 records) – from imperfective iterative stems. The figures on the predicate type distribution in *-no*, *-to* are below: 71% (171 records) of all *-no*, *-to* forms are formed from perfective stems; 19% (45 records) – from imperfective stems; 22% (9 records) from perfective iterative stems, and 1% (3 records) from imperfective iterative stems. The relative frequency of predicate types in agreeing passives differs from that of *-no*, *-to*, cf.: 90% (97 records) of all agreeing passives are formed from perfective stems; 65% (7 records) – from imperfective stems, 3% (3 records) – from perfective iterative stems, and 1% (1 record) – from imperfective iterative stems.

The overall figures on predicate type distribution in the 18<sup>th</sup> c. Polish contaminated texts are as follows: 78% (276 records) of all predicates in agreeing passives and *-no*, *-to* are

formed from perfective stems; 11% (38 records) – from imperfective stems; 10,5% (37 records) – from perfective iterative stems; and 0,5% (1 record) – from imperfective iterative stems. The figures on the predicate type distribution in *-no*, *-to* are below: 75% (222 records) of all *-no*, *-to* forms are formed from perfective stems; 12% (36 records) – from imperfective stems; 12% (36 records) – from perfective iterative stems, and 0,5% (1 record) from imperfective iterative stems. The relative frequency numbers for agreeing passives differ from those for *-no*, *-to*, cf. 95% (54 records) of all agreeing passives attested are formed from perfective stems; 3,5% (2 records) – from imperfective stems, and 1,5% (2 records) – from perfective iterative stems. The formation from imperfective iterative stems has not been attested in agreeing passives in this sub-corpus. The passivoid phenomena in the 16<sup>th</sup> c. contaminated text is formed from both perfective stems – 7,5% (3 records) and imperfective stems – 92,5% (37 records).

**4 (b): determine the changes with respect to predicate type distribution in the course of the Middle period in *-no*, *-to* and in periphrastic and participial passives.**

Our 16<sup>th</sup> c. corpus of literary texts consists of 970 records, there are 289 *-no*, *-to* forms and 681 CP/PPP forms. There are only 5 records of intransitive verbs in this sub-corpus – all of them have been attested in *-no*, *-to* without a head noun (as a sole member of a clause, that is without an object case in their structure). Since we are interested in accusative assigning *-no*, *-to*, we refrain from incorporating these 5 records into our figures. Otherwise the following relative frequency figures have been attained in case of 16<sup>th</sup> c. Middle Ukrainian texts: 89,5% (869 records) are formed from perfective stems, while 10,5% (101 records) – from imperfective ones. The distribution of perfective stems (869 records) as to the construction type is below: 73% (632 records) of perfective stems have been attested in periphrastic and participial passives, while 27% (237 records) of perfective stems have been attested in *-no*, *-to*. The distribution of imperfectives (101 records) in different constructions is as follows: 53,5% (54 records) of imperfective stems occur in periphrastic and participial passives, while 46,5% (47 records) – in *-no*, *-to*. Formation from iterative stems has been attested in both *-no*, *-to*, 0,6% (5 records), and in agreeing passives, 1,5% (13 records) – but only in case of perfective stems.

Our 17<sup>th</sup> c. corpus of texts consists of 1024 records, distributed as follows: 579 *-no*, *-to* forms and 445 CP/PPP forms. There are no records of intransitive verbs in the structure of *-no*, *-to* in this sub-corpus – neither with a head noun, nor as a sole member of a clause. The relative frequency figures that have been attained in the end are below: 91,3% (935 records)

of all 17<sup>th</sup> c. predicates in *-no*, *-to* and agreeing passives are formed from perfective stems, while 8,7% (89 records) – from imperfective stems. The distribution of perfective stems (935 records) in the construction types is as below: 55,6% (520 records) of perfective stems have been attested in *-no*, *-to*, while 44,4% (415 records) of perfective stems – in agreeing passives. The distribution of imperfectives (89 records) across construction types goes: 65% (58 records) of imperfective stems have been attested in *-no*, *-to* predicates; 35% (31 record) – in agreeing passives. Formation from iterative verbs in the 17<sup>th</sup> c. corpus is still not frequent, even if not as rare as in the previous century. In contrast to the 16<sup>th</sup> c. *-no*, *-to* and agreeing passives, that only accept perfective iterative stems, in the 17<sup>th</sup> c. *-no*, *-to* attach to iterative imperfectives as well. The first *-no*, *-to* record formed from iterative imperfective stem was attested in 1605. The related frequency data is below: there are 3% (32 records) of *-no*, *-to* formed from iterative perfective stems, and 0,3% (3 records) formed from iterative imperfective stems; 0,8% (8 records) of agreeing passives are formed from perfective iterative stems.

Our 18<sup>th</sup> c. corpus of literary texts consists of 1951 records, there are 668 *-no*, *-to* forms and 1283 CP/PPP forms. The number of passivoid phenomena in the 18<sup>th</sup> c. has grown considerably in comparison to the previous centuries. There are no records of intransitive predicates in this sub-corpus. The relative frequency figures are below: 99% (1925 records) of all 18<sup>th</sup> c. predicates in both *-no*, *-to* and agreeing passives are formed from perfective stems, while only 1% (26 records) – from imperfectives. The majority of imperfective predicates have been attested in texts translated from Polish. The distribution of perfective stems (1925 records) as to the construction type is below: 66% (1269 records) of them have been attested in agreeing passives, while 34% (656 records) of perfective stems have been attested in *-no*, *-to*. The distribution of imperfectives (26 records) in construction types is as follows: 52% (14 records) of imperfective stems have been attested in agreeing passives; 46% (12 records) – in *-no*, *-to* predicates. Formation from iterative stems in the 18<sup>th</sup> c. corpus is as rare as in the previous centuries: 0,6% (11 records) of all *-no*, *-to* predicates in this sub-corpus are formed from perfective iterative stems; 0,6% (12 records) of agreeing passives are formed from perfective iterative stems; 0,6% (11 records) of all *-no*, *-to* are formed from imperfective iterative stems.

**Objective 5: Investigate the lexical and morphological content of the NP of *-no*, *-to* of the Middle Ukrainian period.**

### **5 (a): investigate changes in morphological composition of the NP of *-no*, *-to* over centuries.**

The lexical and morphological content of the noun phrases that head *-no*, *-to* over the entire Middle Ukrainian period strongly resemble the 16<sup>th</sup> c. Middle Polish pattern. Such homogeneity and stability of the noun phrase composition supports the theory of Shevelov (1969) about a mature Polish accusative assigning *-no*, *-to* (with a copula) being borrowed into Middle Ukrainian in late 15<sup>th</sup> or early 16<sup>th</sup> c. We have not detected any crucial changes in the morphological and lexical composition of the noun phrases that head *-no*, *-to* in the time span from the 16<sup>th</sup> till late 18<sup>th</sup> c. Namely, the majority of *-no*, *-to* in our corpus of texts are headed by forms syncretic between nominative and accusative, especially frequently by neuter nouns and pronouns, less frequently by numerical phrases, quantifiers, units of measurement, numeral-like nouns and feminine *i*-declension nouns. Altogether, in the 16<sup>th</sup> c. literary texts 59% (171 records) of all noun phrases that head *-no*, *-to* are forms syncretic between nominative and accusative; in the 17<sup>th</sup> c. literary texts – 48% (271 records); and in the 18<sup>th</sup> c. literary texts 58% (375 records) of all noun phrases that head *-no*, *-to* are forms syncretic between nominative and accusative. In Poltava trial records 53% (123 records) of all noun phrases are syncretic between nominative and accusative, while in the court files of Żytomyr 53% (74 records) of noun phrases are syncretic between nominative and accusative. The remaining *-no*, *-to* are headed by accusative-genitive singular and plural animates, *a*-declension nouns, partitive genitive, genitive of negation, or they are not headed by any noun phrase.

The number of *a*-declension nouns that mark accusative unambiguously increases from 16 records in the 16<sup>th</sup> c. to 48 records in the 17<sup>th</sup> c., and to 55 records in the 18<sup>th</sup> c. Other forms not syncretic between nominative and accusative are accusative-genitive singular and plural animates. The number of accusative-genitive masculine singular animates has grown in literary texts in the course of the Middle period, but has slightly decreased in administrative texts during the time span. The numbers for each century are below: there are 37 records of accusative-genitive singular animates in the 16<sup>th</sup> c. literary texts, 112 records in the 17<sup>th</sup> c. literary texts and 123 records in the 18<sup>th</sup> c. literary texts; there are 38 records of accusative-genitive singular animates in the 16<sup>th</sup> c. legal texts and 23 records in the 17<sup>th</sup> and 18<sup>th</sup> c. legal texts. The distribution of accusative-genitive plural animates is as follows: there are 41 records in the 16<sup>th</sup> c. literary texts, 95 records in the 17<sup>th</sup> c. literary texts and 48 records in the 18<sup>th</sup> c. literary texts; there are 10 records of accusative-genitive plural animates in the 16<sup>th</sup> c. administrative texts and 8 records in the 17<sup>th</sup> c. texts.

Among forms not syncretic between nominative and accusative is also nominative as object case, that was (rarely) attested over the entire Middle Ukrainian period both in literary and in legal texts. The majority (10) of nominative as object case records belong into the 16<sup>th</sup> c. trial records written in North Ukrainian. In the 16<sup>th</sup> c. literary texts nominative as object case has been attested only 2 times. In the 17<sup>th</sup> c. administrative texts there are only 2 records of nominative as object case and there are none in the 17<sup>th</sup> c. literary texts; both 17<sup>th</sup> c. records seem to be the instances of disrupted agreement typical of legal formulas, rather than of nominative as object case. Both 18<sup>th</sup> c. *-no*, *-to* records headed by nominative have been encountered in a house-keeping diary from Central Ukraine, and are reminiscent of the related North Russian phenomena attested in the lists of enumerated goods or artifacts.

Besides, the *-no*, *-to* are headed by genitive of negation throughout the entire Middle Ukrainian period in both legal and literary texts. Such compatibility of the construction with the genitive of negation speaks in favor of *-no*, *-to* as un-passive predicates, and underpins the hybrid nature of this construction historically. The productivity of genitive of negation slightly increase toward the 18<sup>th</sup> c. The distribution is below: 5 records in the 16<sup>th</sup> c. literary text, 18 records in the 17<sup>th</sup> c. literary texts, and 28 records in the 18<sup>th</sup> c. literary texts; 9 records of in the 16<sup>th</sup> c. legal texts, and 11 records in the 17<sup>th</sup> and 18<sup>th</sup> c. legal texts.

### **5 (b): check Shevelov's (1969) thesis on two morphologically identical but syntactically divergent *-no*, *-to*.**

Scrutinizing the morphological and lexical content of the NP of the NTF and paying attention to the presence or absence of tense marking auxiliary in the structure, helped us to check Shevelov's (1969) premise as to the availability of two morphologically identical, but syntactically divergent *-no*, *-to* constructions with neuter nouns in the NP, and, additionally, figure out that, contrary to claims made in Lavine (2013) and Österreicher (1926), the re-interpretation of personal *-no*, *-to* into impersonal did not have anything to do with the auxiliary drop in mid-17<sup>th</sup> c., since there was no such re-interpretation in Ukrainian before 19<sup>th</sup> or even 20<sup>th</sup> c.

Our data confirm the suggestion made by Shevelov (1969) about two syntactically divergent Middle Ukrainian *-no*, *-to* constructions. Namely, on the basis of our corpus of texts we have come to the conclusion that alongside non-agreeing *-no*, *-to* predicates headed by neuter nouns, historically there are morphologically identical to them agreeing *-no*, *-to* forms with nominative neuter noun phrases that functioned like agreeing passive participles in *-ne*, *-te* in modern Ukrainian. In other words, neuter nouns and other forms syncretic between



nominative and accusative continued to trigger both *-no*, *-to* predicates with accusative and agreeing participles in *-no*, *-to*. Thus, before the affix *-o* fell into a complete disuse as a marker of the neuter singular of participles and was substituted for *-ne*, *-te* in the 18<sup>th</sup>-19<sup>th</sup> c. or even later, the *-no*, *-to* were in fact oscillating between an agreeing form with a raised subject that acquired nominative case and a non-agreeing impersonal construction with a direct object complement marked with accusative.

The tense marking auxiliaries, namely the North Ukrainian/(Great) Russian copula *byti* in the past and future tense in the structure of *-no*, *-to* marked with accusative unambiguously were last attested in 1635 in our corpus of texts, which is in line with another suggestion made by Shevelov (1969), namely his observation that while agreeing *-no*, *-to* forms and non-agreeing *-no*, *-to* forms headed by neuter singular nouns were syncretic in form and tolerated the overt copula, the non-agreeing *-no*, *-to* forms headed by noun phrases not syncretic between nominative and accusative occurred without any tense marking auxiliaries well into the 20<sup>th</sup> c. (180f). Besides, this ties in with Wieczorek's (1994) report on the simultaneous advent of overt tense marking auxiliaries and the instrumental agent in the structure of the Ukrainian *-no*, *-to* predicates as late as early 1900s (45).

That is, our data confirms the following claim made by Shevelov (1969): "... *-no/-to* with acc[usative] were borrowed into Ukrainian from Polish in the 15<sup>th</sup>-16<sup>th</sup> centuries; along with the Polish constructions of the type, by the 17<sup>th</sup> century they had acquired the function of denoting past action by unspecified person(s). However, with neuter nouns Ukrainian preserved its original use of *-no/-to* as participles of personal sentences. Hence while (as in Polish) *bulo*, *bude* were lost in impersonal *-no/-to* sentences, they were retained in personal ones with neuter nouns. [...] Such a situation was internally contradictory, but it was preserved for a long time (and perhaps still in some areas?), especially in those parts of the Ukraine in which Ukrainian-Polish bilinguality supported this asymmetrical use" (180-181).

## 8. Wrap-up summary and outlook

In this contribution we intended to demonstrate the importance and the usefulness of corpora for diachronic linguistic research. Even though our Middle Ukrainian corpus is not perfectly designed to all intents and purposes, it has still proven itself as a useful and handy tool for the investigation of accusative assigning *-no*, *-to* predicates and related passivoid phenomena historically. Namely, the annotated corpus has allowed us to coherently investigate and evaluate the phenomena under scrutiny on the basis of concrete and well

structured data that was easy to retrieve, process and display. Consequently, we have arrived at transparent and reliable generalizations over the entire Middle period based on the iron-clad quantitative empirical data. Below we formulate the generalizations over the *-no*, *-to* that we arrived at on basis of 3,480 observations on Middle Ukrainian – 2,975 from literary texts and 505 from legal documents; and 737 observations on Middle Polish – 345 from PolDi texts and 392 from contaminated texts.

That is the Middle Ukrainian *-no*, *-to* construction with an argument in its structure – as already pointed out by Shevelov (1969) – is not a unified phenomenon, since it embraces several independent construction types. Namely, it can refer to the *-no*, *-to* construction headed by non-neuter noun phrases in accusative which – since it was borrowed from Polish – designated simple past, and lost its tense marking auxiliary the mid-17<sup>th</sup> c. It can also refer to the originally Eastern Slavonic atemporal *-no*, *-to* construction headed by neuter nouns and other forms syncretic between nominative and accusative co-occurring with tense auxiliaries over the entire Middle period and beyond it. These Eastern Slavonic *-no*, *-to* headed by neuter nouns never dropped the copula – the idea already expressed in Shevelov (1969). Besides, in case of Middle North Ukrainian, it can also refer to the third syntactically independent type of *-no*, *-to* – the one with nominative object case in place of structural accusative, a construction strongly reminiscent of modern dialectal North Russian *-no*, *-to*. While the first temporal *-no*, *-to* construction headed by non-neuter noun phrases is obviously impersonal, the second *-no*, *-to* construction headed by neuter nouns, as well as by other forms syncretic between nominative and accusative, is ambiguous between personal and impersonal reading during the entire Middle period – a peculiar discrepancy already pointed out by Shevelov (1969). This second type of *-no*, *-to* construction was obviously re-interpreted into an impersonal structure in later centuries, since in modern Ukrainian *-no*, *-to* can never be employed as agreeing predicates. It is however not clear when and under what circumstances such re-interpretation took place. The third type of *-no*, *-to* headed by nominative object must have undergone the syntactic re-arrangement in its functional heads too, since already in Middle period it began to trigger structural accusative in place of original nominative.

The eastern Slavonic language variety spoken on the territory of today's Ukraine has never been a unified phenomenon, and the Ukrainian has even been described as a “split” language in the literature: while North Ukrainian historically is a pure and well-established language variety with clear-cut norms and very little syntactic variation, Central Ukrainian dialects are known for their mixed character and rich syntactic variation, or co-existence of different forms to express the same linguistic phenomenon. What is striking about Central

Ukrainian language variety is the complete absence of *a*-declension nouns, that is of morphological accusative, in the structure of *-no*, *-to* co-occurring with auxiliaries in both literary and legal texts. There are however numerous accusative-genitive animates in singular and plural in the structure of *-no*, *-to* co-occurring with tense auxiliaries – both in literary and in legal Central Ukrainian texts from the 17<sup>th</sup> and 18<sup>th</sup> c. Thus, Central Ukrainian *-no*, *-to* employed tense marking auxiliaries, but only if headed by accusative-genitive animates, structures typical of Western-Russian dialects that might have been borrowed into Central Ukrainian language variety in earlier centuries. The Central Ukrainian language variety must have also borrowed the mid-17<sup>th</sup> c. accusative assigning *-no*, *-to* that had dropped its auxiliary, since there are numerous copula-less *-no*, *-to* records headed by morphological accusative. Besides, the Central Ukrainian variety, similar to North Ukrainian, naturally employed *-no*, *-to* headed by neuter nouns that tolerated the tense marking auxiliaries and allowed for both personal and impersonal reading over the entire Middle period.

Since Middle Central Ukrainian does not employ nominative as object case in the structure of *-no*, *-to*, while Middle North Ukrainian does, the relationship between these two language varieties reflects the old object case distribution rule formulated in Timberlake (1976, 533) – the choice between nominative and accusative assignment in *-no*, *-to* depends on the type of noun phrase involved, namely *a*-declension nouns trigger the nominative, while accusative-genitive masculine animates trigger the accusative. Besides, nominative object in Middle Ukrainian must have been in free distribution with accusative – as obvious from *-no*, *-to* records simultaneously headed by both accusative and nominative noun phrases in one clause. Such variation within a phrase structure indicates the syntactic vulnerability of the Middle North Ukrainian nominative object and strongly resembles the present syntactic rearrangements in North Russian possessive perfect, where the functional head has been – as observed in Lavine (2014) – currently re-structured, so that accusative is increasingly attested in place of nominative. Namely, the accusative in Minimalist framework is licensed by the functional head voice. Since, as observed in Lavine (2013), both Ukrainian and North Russian have “split” functional heads, the property of assigning accusative and projecting nominative are not bundled together – hence the hybrid *-no*, *-to* structures with simultaneous transitivity property and passive morphology. It seems that the functional head voice was not yet completely split in North Ukrainian language variety, which is obvious from the oscillating syntactic behavior of the direct object complement of *-no*, *-to* in Middle North Ukrainian, arbitrarily realized as either nominative or accusative. Like in North Russian, the process of accusative substitution in Middle North Ukrainian was internally motivated, that is, as

expressed in Timerlake (1974, 182) an earlier syntactic rule for nominative „gave way to a low-level morphological stipulation in the case of *a*-stem nouns“ in Middle Ukrainian, which means that the North Ukrainian language variety „produced“ its accusative assigning *-no*, *-to* on its own.

Even though we have not done any corpus-based empirical investigation of the 19<sup>th</sup> and 20<sup>th</sup> c. *-no*, *-to*, we would dare to delineate the hypothetical development of this construction up to the present time. In the 19<sup>th</sup> c. the originally either „Polish“ or “North Ukrainian” accusative assigning *-no*, *-to* construction without any tense marking auxiliary in its structure replaced the (Great) Russian accusative-genitive animates co-occurring with tense marking auxiliaries. The advent of *-ne*, *-te* desinence for neuter agreeing passives did away with personal reading of *-no*, *-to*, so that *-no*, *-to* headed by neuter nouns no longer hosted tense marking auxiliaries in their structure. This way the accusative assigning impersonal *-no*, *-to* in the 19<sup>th</sup> and early 20<sup>th</sup> c – as vastly reported anywhere in literature – appeared without any auxiliaries in the structure. As already suggested by Shevelov (1969), due to the strong Russian influence this construction was contaminated with Russian periphrastic passives within decades, so that in early 1900s *-no*, *-to* began to trigger tense marking auxiliaries once again. Another symptom of the contamination with the Russian agreeing passives was be the advent of the instrumental agent oblique in the structure of accusative assigning *-no*, *-to* – the development vastly discussed in the literature as well.

## Attachment 1: Excursus into Old Eastern Slavonic *-no*, *-to*

We have scrutinized two historical records written in Old Eastern Slavonic language variety as to *-no*, *-to* predicates: the Galician-Volynian Chronicle and the Chronicle of Novgorod<sup>131</sup>. Galician-Volynian Chronicle is a 13<sup>th</sup> c. record on the history of the Principality of Galicia-Volynia, covering the years 1201 till 1292. This chronicle is one of the three historical manuscripts that comprise the early 15<sup>th</sup> c. Hypatian Codex, the second oldest, after Laurentian Codex, record on the history of the (Western) Ukraine. The Chronicle of Novgorod, covering the years 1016 to 1471 is the oldest surviving chronicle of a medieval Novgorod Republic, which predates the Laurentian Codex by about a century. Its earliest copy from the second half of the 13<sup>th</sup> c. has been preserved in the so-called Synod Scroll.

The *-no*, *-to* forms in Galician-Volynian Chronicle, a large body of text, are not numerous (20 with a head noun; 2 as a lone member of the NP). All *-no*, *-to* forms in this chronicle are headed by noun phrases morphologically syncretic between nominative and accusative. The majority of *-no*, *-to* forms co-occur with a tense marking auxiliary in the structure (14): there are 11 records of aorist copula *bys(t')* or *bě*, 2 records of the future copula *bude(t)* and 1 record of present copula *est'*. NTF has been attested with a numerical phrase or quantitative expression NPs (7), cf. *Ub'eno<NTF> že byst' ich" čislom" 500<NUM>; izbieno<NTF> by(s) i(ch) mno(ž)stvo<NUM-like\_noun>; i by(s) raneno<NTF> mužei stojašči(ch) na zabrole(ch) 100 i 60<NUM>; 40<NUM> knjazej ubito<NTF>; i ubito<NTF> by(s)[t'] knjazej 40<NUM>*. There are also NPs headed by a neuter noun or pronoun (10), likewise forms syncretic between nominative and accusative, e.g. *Sr(d)ce<ACC/NOM\_n\_sg> že eju krěpko [bě] na bra(n) i ustremлено<NTF> na bra(n); Бѣ zagra(di) usta tvoa i ne slyšano<NTF> bude(t) slovo<ACC/NOM\_n\_sg> tvoe; pritreno<NTF> bě boga(t)stvo<ACC/NOM\_n\_sg> i(ch); Anka(d) že vož' emu bě i obešča emu, da selo<ACC/NOM\_n\_sg> ego ne po(ž)ženo<NTF> bude(t); što<ACC/NOM\_n\_sg> [poimano<NTF>, izbito<NTF>, i što ich" Božieju voleju iz"merlo; jako tvoe věr(')noe v"sěanie<ACC/NOM\_n\_sg> ne isušeno<NTF> by(s)[t'] znoe(m) nevěria, no d"(ž)če(m) Bžia pospěšenia rasploženo by(s)[t'] mnogoplo(d)ně; Ap(s)l" oprako(s), prolohy spisa 12 m(s)ca, izloženo<NTF> žytia<ACC/NOM\_pl\_inan> sťy(ch) oč" i děania sťy(ch) mčnk'.*

Several of those exx with NPs syncretic between nominative and accusative co-occur with an agent expression in the form of *ot*-PP (3), cf. *Me(ži)bo(ž)e<ACC/NOM\_n\_sg> vzjato<NTF> ot Danila k[orolja]<ot-PP>; i stoanie<ACC/NOM\_n\_sg> i(ch) na četyre(ch) golova(ch) člč(s)ky(ch) iz'vajano<NTF> o(t) někoego chitreca<ot-PP>; Bivšy(m)sja i(m), poběžen' by(s)[t'] M'stislav' i*

131 Both chronicles and reliable secondary literature on them are available on [izbornyk.org.ua](http://izbornyk.org.ua).

*mno(ž)stvo*<NUM-like\_noun> *o(t) voi*<INST> *ego izbieno by(s)[t']*; as well as in the shape of an instrumental oblique (2), cf. *no vse*<ACC/NOM\_n\_sg> *po(ž)ženo*<NTF> *by(s)[t'] ratnymi*<INST>; *i izymano*<NTF> *by(s)[t'] i(ch) 20 i 8*<NUM> *Ivano(m) Michal(')koviče(m)*<INST>. Agent expressions in the shape of an instrumental oblique occur i.a. in *-no*, *-to* structures without a head noun, that is with *-no*, *-to* as a lone overt member of the NP (2), cf. *V'' subotu (ž) na no(č) popleneno*<NTF> *by(s) okolo Bel(')za i okolo Čer(')vna Danilo(m)*<INST> *i Vasi(l)ko(m)*<INST>; *jako s''věščano*<NTF> *e(s)[t'] bezbožny(m) bojarino(m) tvoi(m) Filipo(m)*<INST> *i bratučjado(m) tvoi(m) Oleksan(')dro(m)*<INST>, *jako ubienu ti byti*.

In sharp contrast to modern Ukrainian and Russian, *-no*, *-to* desinence in earlier periods might function as a modifier within an NP headed by a neuter singular noun (4), similar to *-ne*, *-te* desinence in modern Ukrainian and Polish, cf. *i ukrasi ju ikonami zlatymi, i s''sudy skova služebnya srebreny, i ev(g)lie*<ACC/NOM\_n\_sg> *oprako(s) okovano*<NTF\_attr> *srebro(m)*; *i v''zložy na nju monisto zoloto s kamenije(m) dorogy(m) Postavi (ž) i c'pkv'' sm'go Petra, i ev(g)lie*<ACC/NOM\_n\_sg> *da oprako(s) okovano*<NTF\_attr> *srebro(m)*, *i slu(ž)bnye s''sudy skovany sreb(r)eny, i ka(di)l(')nica srebrena; jev(h)lie*<ACC/NOM\_n\_sg> *oprako(s) zoloto(m) pisano*<NTF\_attr>, *a okovan(')no*<NTF\_attr> *srebro(m) s'' že(n)čjuho(m)*; *jev(h)lie*<ACC/NOM\_n\_sg> *oprako(s) že voločeno*<NTF\_attr> *oloviro(m)*.

The *-no*, *-to* predicates with direct object complement are not numerous in the Chronicle of Novgorod either. We have come across 31 records of NTF, 20 of which co-occur with a copula in their structure: an aorist copula (18) and future copula (2). All these 31 records are headed by noun phrases syncretic in form between nominative and accusative, i.e. neuter nouns and pronouns in the NP, that can all be agreeing structures, cf. *I jako uslyšano*<NTF> *byst' se*<ACC/NOM\_pron>; *I poveleno*<NTF> *byst' vladycě archiepiskop'stvo*<ACC/NOM\_n\_sg> *mitropolitom'*; *a vse*<ACC/NOM\_pron> *iz''obnaženo*<NTF> *i porugano*<NTF>; *narečeno*<NTF> *byst' imja*<ACC/NOM\_n\_sg> *ei Efrosin'ja; bě bo imja*<ACC/NOM\_n\_sg> *ei narečeno*<NTF> *v'' kreščenii Elena; na nei že napisano*<NTF> *sudišče*<ACC/NOM\_n\_sg> *gospodne; ich že učenie*<ACC/NOM\_n\_sg> *razvraščeno*<NTF>; *V se že vremja byst' dětišče*<ACC/NOM\_n\_sg> *vverženo*<NTF> *v Sětoml'*; *poščenie*<ACC/NOM\_n\_sg> *bo isperva proobraženo*<NTF> *byst' Adamu pr''vée; to vse*<ACC/NOM\_n\_sg> *srebreno*<NTF\_attr?>; *čto*<ACC/NOM\_n\_sg> *gdě vynošeno*<NTF>; *Togo že lěta obrětono*<NTF> *byst' <COP\_past\_ru> tělo*<ACC/NOM\_n\_sg> *archiepiskopa Ioana; a vse to*<ACC/NOM\_pron> *zđělano v četyre měsjaci; da i sie*<ACC/NOM\_pron> *ne zabveno*<NTF> *budet' v poslednech rodech; i narečeno*<NTF> *byst' imja*<ACC/NOM\_pron> *ego vo svjatom'' kreščenii Filip''; tělo*<ACC/NOM\_pron> *ego položeno*<NTF> *bě v'' pritvorě svjatyja Sofia; a čto*<ACC/NOM\_pron> *poterjano*<NTF>, *a to ei zaplatiti; ili ukradeno*<NTF> *čto*<ACC/NOM\_pron> *u nego; I bě imja*<ACC/NOM\_pron> *ei narečeno*<NTF> *v'' kreščen'ii Elena; jako ovča*<ACC/NOM\_pron> *na zakolenie*

*vedeno*<NTF> *byst'*; *ich''že učen'e*<ACC/NOM\_pron> *raz''vraščeno*<NTF>; *a tělo*<ACC/NOM\_n\_sg> *ego čestnoe položeno*<NTF> *byst'*<COP\_aor> *v'' pritvorě svjatyja Sofěja*; *i položeno*<NTF> *byst'*<COP\_aor> *tělo*<ACC/NOM\_n\_sg> *ego čestnoe všem'' ierěiskym'' činom'' v manastyř svjatyja bogorodica Blagověščenia*; *i narečeno*<NTF> *byst'*<COP\_aor> *imja*<ACC/NOM\_n\_sg> *emu Ioan''*; *n' v''zveličano*<NTF> *byst'*<COP\_aor> *krestijan'stvo*<ACC/NOM\_n\_sg> *v rod i rod*; *no tolko bjaše*<COP\_aor> *ne rozverženo*<NTF> *krestnoe cělovanie*<ACC/NOM\_n\_sg> *Novugorodu s Němci*; *vse*<Q> *do nagoty iz''lupleno*<NTF>; *ano tamo izmano*<NTF\_attr> *vjač'sie mužy*<ACC/NOM\_pl>; *i černorizec v nich'' ispolneno*<NTF> *byst'*. Besides, there are records of NTF headed by a quantifier (3), one of which co-occurs with an agent phrase expressed in the ot-PP (1), cf. *a gospodinu kolko*<Q> *budet' voz'' ukradeno*<NTF>, *to imati emu za voz'' po dvě nogatě*; *među malo*<Q> *vareno*<NTF> *a družiny mnogo*; *mного*<Q> *že krestijan'' i Litvy i Ljachov'' ot Němec'*<ot-PP> *izbieno*<NTF> *byst'*<COP\_aor>.

The examination of the *Gramoty Velikogo Novgoroda i Pskova*, a compilation of administrative texts and file records, has given the following results: there is 1 record of old accusative-nominative form, cf. *A čto golovy poimano po vsei volosti Novgorod'skoi, a tě poidu[t'] k Novugorodu bez'' okupa* (1316); and 1 accusative-genitive inanimate form, cf. *Što prodano knjažich'' volostii do Velika dni, a što budet' ne prodano po Velicě dni, to po cělovan'ju povědati* (1327).

## Attachment 2: Excursus into Middle Russian *-no*, *-to*<sup>132</sup>

We confirm the statement in Moser (1998) about the apparent, or fake, *-no*, *-to* evidence in Middle Russian, that is records that only superficially resemble the accusative assigning *-no*, *-to*, but are in fact agreeing passives or instances of disrupted agreement (410). The authentic *-no*, *-to* construction however has been attested in Middle Russian contaminated texts<sup>133</sup>, like official documents written in Middle Russian chancellery language called *prikaznyj jazyk*, that was influenced by Middle Ukrainian (see 4.2.2). Thus, we have analyzed the *-no*, *-to* records in *Vesti Kuranty* (1656-1670), also known as *Muscovite Kuranty*<sup>134</sup>. Since many, if not the majority, of the scribes in *Posol'skij Prikaz*, a 17<sup>th</sup> c. Muscovy equivalent of a

<sup>132</sup>The following texts have been investigated: Stoglav (1551), *Vesti Kuranty* (1656-1670), *Akty istoričeskie* (1484-1597), *Akty juridičeskie* (1479-1619), *Akty Moskovskogo Gosudarstva* (1577-1614), *Gramoty Gosudarstva Moskovskogo* (1516-1517), *Otkaznye knigi* (1621-1645), *Russko-Livonskie Akty* (1189-1603).

<sup>133</sup>We do not discuss *-no*, *-to* records from Andrej Kurbskij's and Grigorij Kotošychin's contaminated works here, since they have already been discussed in detail i.a. by Moser (1998, 340-343) and Damerau (1963, 60-62).

<sup>134</sup>These are 17<sup>th</sup> c. hand-written translations of predominantly German and Dutch newspapers delivered via Riga and Vilnius. These compilations of translated newsletters contained stale news and were made in Moscow to inform the tsar and selected officials about (often outdated) foreign affairs. The translations were made by governmental officials of predominantly Ruthenian origin – hence the “contaminated” nature of these texts.

ministry for civil and judicial issues were Ukrainians or Belorussians, we have expected to come across numerous records of accusative assigning *-no*, *-to*.

The overall number of such records in this vast body of texts however is very small. The most frequent pattern is *-no*, *-to* headed by accusative-genitive plural animates/inanimates (5), cf. *a ešče cesarskich" ljudeji<ACC/GEN\_pl> poslano<NTF>* (1660); *na karabljach ljudei<ACC/GEN\_pl> pobito<NTF> i raneno<NTF>* (1666); *i inych mnogich načalnych ljudei<ACC/GEN\_pl> oubito<NTF>* (1666); *i korolevskich načalnych<ACC/GEN\_pl> pobito<NTF> Polbyc'ki* (1666); *videno<NTF> vozvraščajuščichsje ot Kandyi grada francouzskich" karablei<ACC/GEN\_pl>* (1669). This large body of administrative records has only 1 record of accusative-genitive singular animate form, cf. *Moustopa Ibraima polkovnika<ACC/GEN\_sg\_anim> da atamana Ismailja oubito<NTF>* (1652). Besides, there are forms syncretic between nominative and accusative (3), like quantifier noun phrases (1), e.g. *ljudei ou nich mnogo<Q> sobrano<NTF>* (1666), and plural inanimates (2), e.g. *no pōbito<NTF> ot nich na těch pristupech mnogie tyseči<ACC/NOM\_pl\_inan>* (1667); *mnogie tyseči<ACC/NOM\_pl\_inan> vōinskich ljudei ot vinicējan" pobito<NTF>* (1668). In this vast body of texts there is only 1 record of morphological accusative, i.e. *poimano<NTF> pašou<ACC\_a-decl> agu Selim" da drougovo pašou<ACC\_a-decl>* (1652). Moreover, there are 2 records for nominative as object case, cf. *a nagrouženo<NTF> v nich" smola želēzo* (1664); *polovina kormov ich" davano<NTF>* (1667).

In addition to *Vesti Kuranty* written in chancellery language of the time, we also investigated letters of correspondence (1652-1663) of the boyar Morozov from Moscow region dealing with domestic issues and matters in his land estate. The overwhelming majority of *-no*, *-to* predicates in this text is headed by a numerical phrase, syncretic between nominative and accusative, cf. (some of) the records: *prislano<NTF> 9 višin<NUM> do 10 sliv; posażeno<NTF> 300 pen'kov<NUM>; nabito<NTF> 40 boček<NUM>*. There are also several cases of *-no*, *-to* headed by partitive genitive, cf. *Poslano<NTF> na funt ladanu<GEN>; chleba<GEN> vysejano<NTF>; da chmelju<GEN> kupleno<NTF> na 2 alt.*; and of genitive of negation, cf. *kormu<GEN> ne ukazano<NTF>; mesta<GEN> ne poženo<NTF>*. Nominative as object case has also been attested (2), cf. *Da prislano<NTF>, g., ko mne, ch.t., tvoja gosudareva gramota<NOM\_a-decl>; Poslano<NTF> k tebe gosudareva gramota<NOM\_a-decl>; postavleno<NTF> u nevo skrynka<NOM\_a-decl/ACC\_m\_inan>*. There are several cases of accusative-genitive plural inanimates, cf. *uvezeno<NTF> breven<ACC/GEN\_pl\_inan>; rozdano<NTF> gosudarevych deneg<ACC/GEN\_pl\_inan>; pošlin<ACC/GEN\_pl\_inan> plačeno<NTF>*. Where is 1 record of NTF headed by an accusative-genitive singular animate NP, cf. *togo krest'janina<ACC/GEN\_sg\_anim> dosmatrivano<NTF>*. Another, smaller 17<sup>th</sup> c. compilation of official documents, *Otkaznye knigi*, has the following records: 1 genitive of negation NP,



i.e. *A to evo poměšt'ja*<GEN> *porazžo ne otdano*<NTF> *nikomu* (1633); 1 form syncretic between nominative and accusative, i.e. *ei dano*<NTF> *otca eš Grigoreva poměšt'e*<ACC/NOM\_sg\_inan> (1631).

The earlier, that is the 16<sup>th</sup> c. NTF records we have examined exhibit similar patterns as the correspondence of the boyar Morozov. We have analyzed several compilations of official documents: *Akty istoričeskie* (1484-1597), *Akty juridičeskie* (1479-1619), *Akty Moskovskogo Gosudarstva* (1577-1614), *Gramoty Gosudarstva Moskovskogo* (1516-1517), *Otkaznye knigi* (1621-1645), *Russko-Livonskie Akty* (1189-1603). The scarce NTF evidence collected from all these official documents is below. In *Akty istoričeskie*, the official documents from Novgorod and other areas, there are *-no*, *-to* forms with a numerical phrase, often currency, in the NP, cf. *Pošlin*"<ACC/GEN\_pl\_inan> *mitropoličich*" *otdano*<NTF>: *mitropoličju pečatniku starcu Misajlu 9 altyn" i 2 dengi* (1581); *da dijačich*" *pošlin*"<ACC/GEN\_pl\_inan> *otdano*<NTF> *v" kaznu kaznačěju starcu Pachnot'ju 4 altyny i 4 dengi* (1589); *dano*<NTF> *tri*<NUM> *svjazki plavnye lovli* (1588); there is also 1 record syncretic between personal and impersonal reading, cf. *Da im*" *že bylo dano*<NTF> *v" Astorochani, v" rjadu, město*<ACC/NOM\_n\_sg> *pod*" *lavku* (1588). Another 16<sup>th</sup> c. compilation of the official documents, *Akty juridičeskie*, has the following ambiguous records, cf. *a pisal*" *otstupnuto*<NTF> *Charlampejko Semenov" syn", lěta 7045* (1571); *A gde budet*" *ta moja votčina, selo*<ACC/NOM\_sg\_inan> *Kur"janova, založeno*<NTF> *v" deneznom" dolgu, ili v" chlebnom"* (1546).

One more 16<sup>th</sup> c. compilation, *Akty Moskovskogo Gosudarstva*, has *-no*, *-to* forms headed by numerical phrases, like *i pribrano*<NTF> *195 čelověk"*<NUM> *kazakov"* (1577); *i pribrano*<NTF> *315 čelověk"*<NUM> (1577); *žalovan'ja dano*<NTF> *v" ich" oklady 118 rublev"*<NUM> (1577); there is 1 record of an accusative-genitive animate, cf. *iz" těch" konnych" žileckich" kazakov"* *vybrano*<NTF> *storožej*<ACC/GEN\_pl\_anim> *na pol'skie posylki* (1577); and 1 record of genitive of negation, cf. *ne dodano*<NTF> *gosudareva žalovan'ja*<GEN> (1591). Apart from that, there are records ambiguous between nominative and accusative, cf. *gosudarevo žalovan'e*<ACC/NOM\_sg\_inan> *dano*<NTF> *ž"* (1591); *i tēm" dětem" bojarskim" davano*<NTF> *gosudarevo deneznoe žalovan'e*<ACC/NOM\_sg\_inan> (1591); *i tēm" dětem" bojarskim" gosudarevo deneznoe žalovan'e*<ACC/NOM\_sg\_inan> *ne dano*<NTF> (1591). An early 16<sup>th</sup> c. compilation of administrative documents, *Gramoty Gosudarstva Moskovskogo* contains 1 record of genitive of negation, i.e. *no i věstej nikakich"*<GEN> *ne polučeno*<NTF> (1517). The 15<sup>th</sup> and early 16<sup>th</sup> c. records, *Russko-Livonskie Akty*, have the following 2 records: 1 form of accusative-genitive inanimate sg, i.e. *kakylinii byl" tovar"*, *nikakogo čego*<ACC/GEN\_sg\_inan> *vyloženo*<NTF>, *bez" vsjakoja chitrosti* (1405); 1 record of partitive genitive, i.e. *I čto u Jakova u posla grabežu*<GEN> *vzjato*<NTF>, *i poslu Pskovskomu na tom" celovatiž"*, *čto u nego grabežu*<GEN> *vzjato*<NTF> (1531).

Finally we also looked for *-no, -to* in *Biblioteka literary Drevnej Rusi*, a multi-volume compilation of Old and Middle Russian literary texts. We especially concentrated on the volume 16 and (partially) on the volume 15. These volumes contain 17<sup>th</sup> c. texts. There is only 1 record of unambiguous accusative assigning *-no, -to* in these two volumes, which has been attested in *Gesta Romanorum (Rimskie dejanja)*, a late 17<sup>th</sup> c. translation of a collection of tales from Polish into Middle Russian, cf. *I kak" ju<ACC\_a-decl> otpuntovano<NTF>, uzrěl" mistr" pan'ju v cvětnych" rizach" ležašču* (*Rimskie dejanija* (vol. 16), 344).

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